'It's Important to Know In Time'

Member Associated Business Papers, Inc.; Audit Bureau of Circulations.

The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory

AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★

Technical Governmental

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Inside Dope

By George F. Taubeneck

Make 'Em Suffer
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Make 'Em Suffer

Washington news sources have said that behind much of the recent crack-down administrative edicts which have affected civilian life and civilian production is a desire on the part of military leaders to bolster the morale of our fighting troops.

"Surveys of opinion taken among men serving abroad," one highly placed man put it, "indicate that some of our fighters believe that too many of the folks back home are getting rich and having a wonderful time out of this war. We decided it was necessary to do something about this."

Well, they've done a few things, and these crack-downs apparently have had, in a small way, the desired effect.

Some of this firm's extraordinarily high percentage of employes-in-service have been back on furlough, recently, and their astonishment at conditions is quite interesting.

'You Poor Civilians!'

Take Ed Henderson, for example. Ed has been home twice in the last three months, and each time he has departed, shaking his head and saying: "You poor civilians! I'll be glad to get back to my destroyer!"

Ed is a lad in whom the NEWS can take justifiable pride. He entered the Navy as an ordinary gob. After seeing plenty of trouble in both the Atlantic and Pacific on an old four-stacker (he wears two combat stars on his ribbons), Ed was plucked out of the ranks and given a chance to qualify for a commission—which he did.

That's rare in the Navy.

He's now in charge of radar equipment on one of the new super-destroyers, and raring to go.

"Somebody is going to get a rough surprise," he says, "when they run up against us. Not only do we have something special in the way of a ship, but we have *a great bunch of fellows*—all enthusiastic, all ready to give their best, all ready to place The Cause above selfish ambitions or gripes.

"Naturally, there's no comparison between the sacrifices of men in service and people at home. But nobody who has been back recently can say you folks are leading the Life of Riley."

Panamanian Capers

Jack Sweet, who has been buried in the jungles of Panama for nigh onto three years, was also home recently.

Jack simply couldn't get used to the difference between civilian life as he remembered it and civilian life as he found it.

However, he had a wonderful set of "Snafu" stories to tell. "Snafu" is Army slang for a phrase which, when cleaned up, would read: "Situation normal—all fouled up."

Army life in remote outposts can be pretty rugged, we gather.

G.I. Addenda

Further notes on this company's G.I.'s:

Jim McCallum, an aerial photographer who has mapped several interesting portions of the globe—from

(Concluded on Page 4, Column 3)

Canadians Set For Montreal Meeting On March 18-19

MONTREAL, Canada — Program plans have been completed for what —in view of restrictions on conventions in the U. S.—will probably be the major refrigeration convention in North America in 1945, the Interprovincial Association of the R.S.E.S. annual conference, to be held Sunday and Monday, March 18 and 19, at the Mt. Royal hotel in Montreal.

This is the first Interprovincial Conference to be held in Montreal, and a large attendance is expected not only from Canadian service contractors and manufacturers, but also from representatives of firms in the United States.

As is the usual custom, the meeting will open with a business session on Sunday morning, March 18, presided over by W. J. Marshall of Toronto, president of the Interprovincial Association.

Starting Sunday afternoon and continuing Monday morning and Monday

(Concluded on Page 32, Column 1)

G.H.Smith Named V.P. Of Deepfreeze Div.

NORTH CHICAGO, Ill. — G. H. (Rock) Smith has been appointed vice president and general manager of the Deepfreeze Division of Motor Products Corp., announces A. L. Lott, president of the company.

For the past several months Mr. Smith has been associated with the Magnavox Co., Fort Wayne, Ind., as a merchandising counselor. Prior to his consulting work he was general sales manager of Hotpoint (Edison G. E. Appliance Co., Inc.), for several years.

Mr. Smith will be located at the North Chicago, Ill., plant.

Westinghouse Elevator Establishes Separate Conditioning Division

JERSEY CITY, N. J. — Ellis L. Spray, vice president and general manager of the Westinghouse Electric Elevator Co., has announced the creation of two separate divisions to carry on the work of the company, the Air Conditioning and the Elevator Divisions.

Ross Rathbun, formerly manager of air conditioning, has been appointed manager of the expanded Air Conditioning Division, which now includes the Precipitron; and Walker G. White, formerly sales manager, has been named manager of the Elevator Division. George F. Begoon, who for several years has directed commercial development of the

(Concluded on Page 29, Column 2)

Steel, Copper out For 'Spot;' Other Allocations Cut

WASHINGTON, D. C.—The predicted adverse effect of the tightening critical materials supply on civilian goods manufacture became a reality last week.

No carbon steel, alloy steel, or copper can be made available for deferred allotments under the "spot authorization" procedure at the present time, WPB announced. This will virtually nullify for the time being the production of civilian goods under the "spot" plan, although idle and excess materials can still be used.

While the total demand for aluminum for all claimant agencies has increased substantially over that of the first quarter, it has still been possible to make 25 million pounds of aluminum available for deferred allotments under the "spot" procedure during the second quarter, WPB officials said.

At the same time it was announced that allocations of steel for production of non-electric cooking and heating stoves have been decreased from 48,000 tons in the first quarter to 36,500 tons for the second quarter. Of the total allocation, 27,000 tons will be allotted for cooking stoves and 9,500 tons for heating stoves.

The authorization stipulated that stove manufacturers in labor areas 3 and 4 be allotted steel at the rate of 100% of their first quarter grants,

(Concluded on Page 29, Column 3)

IN THIS ISSUE

Are refrigerator owners satisfied with their present makes? When they buy a new one after the war will they try another brand? A report of a new kind of survey made in Warren, Ohio, which included these questions appears on Page 8 of this issue.

Greater restrictions on occupational deferments may cause further shortages in the already critical manpower situation in the refrigeration industry, particularly among repairmen. Revised deferment procedures as outlined by WPB appear on Pages 12 and 13.

Do postwar plans of mill supply, plumbing, and automotive jobbers indicate a threat to the present appliance, refrigeration parts, or air conditioning distribution setup? See Page 11.

Important role which the architect can play in postwar expansion of air conditioning is discussed on Pages 18 and 19.

Trouble-shooting guide for refrigerating and air conditioning units that U. S. Army engineers use appears on Page 21 by special permission of the War Department.

Parts Obtainable On 547 Form, But Not Package Units

WASHINGTON, D. C.—Use of WPB Form 547 (the "inventory form") is still "frozen" for capital equipment such as complete condensing units and commercial refrigerators, but it still can be used to obtain repair components for refrigeration systems.

Among the type of repair components for which 547 applications receive consideration are compressor bodies, evaporators, expansion valves, service valves, controls, dryers, and other equipment generally accepted as repair parts.

The preference ratings usually assigned on 547's for these repair parts are AA-2X for most all except evaporators, which are being assigned AA-4.

One factor that may confuse jobbers and dealers in the field is that in current instructions for the use of the WPB-1319 Form, it is specified that WPB-547 be used where distributors or dealers require equipment for inventory. Reason for this, say WPB officials, is that Form 547 has not been permanently revoked, and thus it must be included until some permanent change is made in Order L-38.

WPB officials feel that with few exceptions no hardship has been created for jobbers and dealers through freezing of the inventory form. It has only been of recent date that the freezing of this form reflected on the order boards of the manufacturers, and it is claimed that there are still quite a few orders of condensing units and store equipment to be shipped on 547 forms approved last Fall.

Farm Freezer Group Elects New Officers

WASHINGTON, D. C.—F. J. Bommer, Jr., of the Sanitary Refrigerator Co. of Fond du Lac, Wis., was elected president of the Farm and Home Freezer Manufacturers Association at a recent meeting of the group in Chicago.

New vice president is J. K. Noel, Jr., of Victor Products Corp., Hagerstown, Md.; secretary is S. C. Bell of Quillen Bros. Refrigerator Co., Indianapolis; treasurer is J. E. Wilson, Jr., of Wilson Cabinet Co., Smyrna, Del.

E. G. Vail continues as executive secretary, with headquarters at 1706 L St., N.W., Washington, D. C.

Commenting on the large number of spot authorizations made by WPB for freezer production, Mr. Vail reveals that shortages of materials and labor have kept actual production to a minimum.

Control Makers Meet With OPA on Prices

WASHINGTON, D. C. — The 10 representatives of the electrical control industry who comprise the advisory committee recently appointed by the Office of Price Administration were scheduled to hold their first meeting with OPA officials here March 8.

Known as the Domestic and Commercial Electrical Control Manufacturers' Industry Advisory Committee, the group is to represent the 43 manufacturers of such items as thermostats, pressure controls, acquastats, for refrigerators, air conditioners, and heating plants in discussions of pricing problems that may occur when peacetime production is resumed.

Members include W. L. Huff, vice

(Concluded on Page 29, Column 3)

Distributors See No Other Factor Replacing Them

Direct Factory Branches Not Likely Outside of Big Cities, They Feel

NEW YORK CITY—How appliance distributors are thinking on such problems as their place in the distribution setup, the competition that is likely from direct factory distribution, and the extent to which it will be necessary to appoint new retailers, was revealed in a meeting of the planning committee of the National Electrical Wholesalers Association here last month.

Conducted in the nature of a forum, the meeting had as its special guests representatives of the press and press associations.

"When the wholesaler is unable to take goods from the manufacturer to the consumer more cheaply and effectively than can be done by any other means, the wholesaler then will cease to continue in business," was in essence the statement made by Herbert Metz of Graybar Electric Co., in his opening statement telling why the wholesaler had a place in the distribution setup.

The 1939 U. S. Census Study on Costs of Distribution was cited by Mr. Metz to demonstrate the relative efficiency of the wholesaler type of distribution. This study showed that manufacturers' sales branches, with stocks, operated at a cost of 19.8% of sales as against an 18.7% cost of operation incurred by wholesalers in the same period.

Direct factory branch type of distribution has been almost entirely confined to metropolitan or "mass" market centers, explained E. B. Ingraham of Times Appliance, Inc., in discussing this principal threat to the independent wholesaler.

In such markets, there is an opportunity for the manufacturer to experiment in direct selling, and then too, the manufacturer is often hard put to find an independent distributor to do the job the way he would like to see it done. Many distributors in metropolitan areas don't like to restrict their merchandise to a single make.

In smaller markets there is a definite limitation to potential volume and a history of not too satisfactory experiences where direct selling had been adopted, Mr. Ingraham pointed out.

A number of plans for cheaper distribution were projected about two years ago, but since that time many manufacturers have concluded that plans such as setting up factory branches are not too desirable, observed R. J. Brown of General Electric Supply Corp., Bridgeport, Conn.

Point was then made that department stores will probably intensify their merchandising of electrical appliances after the war, particularly promoting a single private brand line, which would be bought by a central buying organization acting for a number of affiliated stores. This, it indicated, might be a much more important problem than the matter of direct factory branch vs. the independent wholesaler method of distribution.

Mr. Brown expressed the belief that manufacturers producing the private brand lines would need designers and other production specialists, and that shipments made by the factory would result in a warehouse cost to be borne either by the manufacturer or the department store. Such factors would tend to increase costs to the point where this type of distribution would prove no cheaper than present low cost whole-

(Concluded on Page 29, Column 1)

70% of Food Eaten by Soldiers in U.S. Requires Refrigeration, General Says

CHICAGO — Announcement that "70% of all food eaten by soldiers in this country is of the perishable variety and that steadily increasing amounts are going overseas to our front-line fighters," was made by Maj. Gen. Carl A. Hardigg, director of the Subsistence Division, Office of the Quartermaster General in Washington, D. C., at the recent Amy Food Service Refrigeration Conference held at the Edgewater Beach Hotel here.

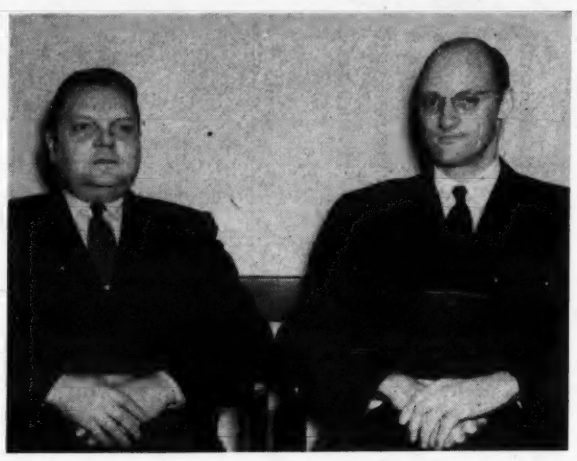
And Brig. Gen. H. V. Beyette, personal representative of Lt. Gen. Brehon B. Sommervell, commanding general of Army Service Forces, emphasized that "correct refrigeration is absolutely vital to conservation of perishable foods. It prevents spoilage and consequent wastage that might otherwise occur."

To investigate refrigeration problems involved in the Army's preservation and conservation of perishable foods, the conference brought together high ranking Army officers and refrigerated warehousing specialists who have been appointed by the Secretary of War as consultants to augment the Army Food Service Staff.

"In these days of strict civilian food rationing the public is extremely

(Concluded on Page 32, Column 2)

Take New Posts at Marion, Ohio Plant



Henry J. Schwartau (left) becomes chief inspector, and Barney Taft (right) has been appointed assistant chief engineer in new plant staff appointments announced by Universal Cooler Corp.

* * *

Universal Cooler Appointments Add To Engineering Staff

MARION, Ohio—Appointment of Henry J. Schwartau and Barney Taft as chief inspector and assistant chief engineer, respectively, of Universal Cooler Corp., has been announced by President F. S. McNeal.

Chief Inspector Schwartau has been active in refrigeration and allied fields for 20 years, entering the industry after studying mechanical engineering at Mexico City College. Before coming to UCC, he served successively with Kold Hold as production manager; with the General Refrigeration Division of Yates American Machine Co., Beloit, Wis., as plant superintendent; and with Kelvinator and Servel.

Assistant Chief Engineer Taft returns to Universal Cooler after having served as development engineer for UCC in Detroit and Marion from 1935 to 1942. He recently was with the H. K. Ferguson firm of Cleveland (Ohio), engineering contractors and builders. A graduate of the University of Wisconsin, he later was assistant chief engineer at the Vilter Mfg. Co., in Milwaukee.

Dealer Prefers 'First Come First Served' Plan For Initial Postwar Appliance Sales

He Cites Some Possible Problems In 'Priority' Plans

FRESNO, Calif.—Appliance dealers who rush into "priority plans" guaranteeing early delivery of new refrigerators to preferred customers are letting themselves in for many headaches, according to Tony Fernandez, appliance manager at Godschaux's store here.

"There's a lot more potential ill wind and danger in these ideas than goodwill," Mr. Fernandez pointed out. "Because every housewife who registers her name with the dealer will feel that the moment a few boxes are released in the city, she should have one.

"If 10 refrigerators are sold, the customer holding Priority No. 12 will feel that she has been cheated, and grow angry enough that she will never forget. A lot of people are going to lose their tempers over situations of this kind, until the chances are that all the names on the list will represent liabilities instead of goodwill assets.

"It will be even worse if cash is involved in the priority plan. Unquestionably customers are willing to lay money on the line, even anxious to do so. They feel this will help insure their receiving the very first refrigerator possible—but at the same time it tempts the dealer to sell his quota first to other customers, because holding the depositor's token payment, he is sure that they will buy. I understand that many dealers are taking cash deposits in this way, and hope they come out on top."

Mr. Fernandez likewise feels that many customers upon hearing of the offer will register a number with as many dealers as possible, secure in the knowledge they can take whichever box is offered them first. In this way the prospect list compiled is actually false value, and cannot be depended upon for making up merchandising or inventory plans.

"I've found that the average prospect does believe in the priority plan all right," Mr. Fernandez admitted, "which makes it worse if the dealer is forced to disappoint them. We all know that the manufacturer is going to have to release new lines on a quota basis for some time at least, and that, therefore, we cannot begin to supply the demand, priority or no priority.

"It will not require any advertising or promotion of any kind to sell off the first stock received. I know from experience how quickly such news gets around. I received two dozen galvanized wash tubs last winter which I intended to use as a spring promotion. On the first morning I had them more than 60 women came in to buy, snapping the stock up by noon. No announcement had been made—the news simply got out and customers flocked in.

"Consequently we're going to simply sell on a first-come first-served basis, which entails no goodwill risks and will offend no one. This will eliminate all the paper work."

General Refrigerators Corp. Is Penalized

NEW YORK CITY—Restrictions on the delivery of new refrigerator parts have been imposed by the War Production Board on General Refrigerators Corp., household and commercial refrigeration dealer here, for alleged violations of Order L-38.

According to WPB, the firm unlawfully delivered 50 new condensing units between Jan. 1 and June 15, 1944, in violation of L-38. The WPB-imposed restrictions run from Feb. 14 to Aug. 14, 1945.

WPB has ordered that the firm "shall not sell, deliver, or transfer, for its own account or for the account of others, any new commercial refrigerating systems or any new parts designed or intended for incorporation or use in commercial refrigerating systems, except pursuant to purchase orders bearing preference ratings of AA-1-MRO or higher, unless hereafter specifically authorized in writing by the WPB."

The restrictions do not apply to delivery of new parts for replacement or to the delivery of new parts to ultimate consumers authorized on WPB forms 1319, 617, or 542.

Mr. Dealer . . . Let's take a look at Frigidaire's Wartime Advertising from your Customer's viewpoint

It helps me—that's the big thing about Frigidaire's wartime advertising. We homemakers have lots of unusual problems nowadays, and you can be sure we read ads that help us solve them.

Frigidaire's wartime advertising helpful? Just look at these recent headlines: "How to Keep Meat"..."How a Refrigerator Helps Make Hot Breads and Pastries" . . ."How to Cook a Meal in Your Refrigerator". . . "How to Keep Your Refrigerator Happy" . . .

Wouldn't you, Mr. Dealer, read helpful ads like these if you were a homemaker harassed by wartime lack of foods, lack of time, lack of household help —perhaps worrying whether your refrigerator was going to last out the war?

You bet you would! And that's what homemakers *are* doing—looking to Frigidaire for help in easing wartime difficulties . . . for ways to help the war effort by conserving food and keeping vital refrigeration equipment in operation.

Wherever I look, its seems to me, I see Frigidaire ads.

Naturally! Helpful Frigidaire ads appear regularly in all these magazines: *Good Housekeeping, Ladies' Home Journal, McCall's, Woman's Home Companion, American Home, Better Homes & Gardens, Sunset, Collier's, Life, The Saturday Evening Post, Time, Electricity on the Farm, Farm Journal, Holland's, Household, Pathfinder, Progressive Farmer, Successful Farming.*

Here's advertising coverage! A circulation of 37,704,000 for every message, reaching every type of community, every age and income group.

In addition, practically all the home economists in the country—and through them, thousands of students and homemakers—helped with other Frigidaire ads in all leading Home Economics publications.

They're so eye-catching that I always notice Frigidaire ads.

Yes, and so do millions of other magazine readers see these colorful, attractive ads. Checks by an independent research organization prove that they are seen by more women and read by more women than any other ads in the home appliance field.

These Frigidaire booklets have helped me tremendously. I first read about them in Frigidaire ads.

Urgent and vital was the need for Frigidaire's two booklets on refrigerator care and use! More than 11,500,000 copies of "Wartime Suggestions" and "101 Refrigerator Helps" have been distributed, nearly 10,000,000 through Frigidaire Dealers.

In addition, more than 750,000 students and homemakers have seen the helpful motion picture "How to Get the Most Out of Your Refrigerator."

How do I feel about Frigidaire? Most of all, I have a feeling of confidence in Frigidaire. I suppose that's because I've become so familiar with this company—and because Frigidaire advertising has helped me so. I know who and where my Frigidaire Dealer is—that's where I got my free booklets. And I know that when refrigerators, electric ranges, and other appliances for my home become available once more . . . *I'm going to see my Frigidaire Dealer first!*

BUY MORE WAR BONDS!

Look to Frigidaire for Leadership through . . . ADVERTISING

For Excellence ARMY (E) NAVY *in War Production*

FRIGIDAIRE
Division of
GENERAL MOTORS

DAYTON 1, OHIO • LEASIDE, 12, ONTARIO

Peacetime builders of

ELECTRIC REFRIGERATORS • RANGES • WATER HEATERS
HOME FREEZERS • ICE CREAM CABINETS
COMMERCIAL REFRIGERATION • AIR CONDITIONERS
BEVERAGE, MILK, AND WATER COOLERS

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)

the North Pole to Africa and India—has been reassigned.

Formerly he took his pictures from a Flying Fortress. Now he will be pointing his camera from a B-29. That probably means Tokyo!

Jack Adams, who was our Business Manager, is a senior-grade Lieutenant in the Navy.

He did so praiseworthy a job in the Marianas that, on personal request of the Admiral himself, Jack has been transferred to an Admiral's staff. How's that for achievement?

Paul Park, a former advertising salesman, is now not only a Captain in the U. S. Marine Corps, but currently has been detailed to write an instructional manual on personnel handling—after more than two years spent on Pacific duty.

First Lieutenant George Hanning, formerly an assistant editor, spent almost three years as a tank destroyer leader. Suddenly he was reassigned to London duties, where he is now writing propaganda leaflets and broadcasts. Excellent training, for peacetime purposes!

Naval First Lieutenant Robert Nixon is Commanding Officer of a brand new minesweeper. He invited us to go along during its shakedown cruise—an offer we'll never be reconciled to missing!

Morale of our two WAVES, however, is not so high. They're now being bored with just what they were working at in civilian life. They are stenographers—in bad locations, on long hours, and with grumpy bosses.

Well, they can't all be happy!

Footnote

Here at the NEWS it has been our policy to plug the manpower gap as best we could by hiring servicemen's wives and sweethearts.

One of these wives—"Stevie" Corkin—passes on to us a funny story about her husband which adds the comic touch to this review of our Service Personnel, their achievements, and their morale.

It seems that her husband was shivering through a relentless rain in a Philippines foxhole. No relief was in sight.

But an intrepid mail-deliverer did manage to drop a letter into Sergeant Corkin's foxhole, before dodging out of sight.

Sergeant Corkin opened the letter and read it. This letter was addressed to "All Soldiers of the X Division."

It said, simply: "Please do not attempt to indulge in unnecessary holiday travel. The trains are overcrowded."

Sanity in Perspective

War is so crazy a phenomenon—so obviously a manifestation of mass insanity—that we feel urged at this point to quote a remarkable note.

The Westinghouse "Time Capsule"—an 800-pound intended letter for historians 5,000 years hence—has been deposited 50 feet below the surface of the New York World's Fair grounds.

Among the messages to posterity cradled in this "Time Capsule" is this one from Professor Einstein:

To Whom This May Concern

Our time is rich in inventive minds, the inventions of which could facilitate our lives considerably.

We are crossing the seas by power and utilize power also in order to relieve humanity from all tiring muscular work. We have learned to fly and we are able to send messages and news without any difficulty over the entire world through electric waves.

However, the production and distribution of commodities is entirely unorganized so that everybody must live in fear of being eliminated from the economic cycle, in this way suffering for the want of everything.

Furthermore, people living in different countries kill each other at irregular time intervals, so that also for this reason any one who thinks about the future must live in fear and terror.

This is due to the fact that the intelligence and character of the masses are incomparably lower than the intelligence and character of the few who produce something valuable for the community.

I trust that posterity will read these statements with a feeling of proud and justified superiority.

Albert Einstein

Who's afraid of the postwar world?

Mention postwar business to some folks and they'll warn you about hard times, tough competition, unemployment.

Other folks see easy sledding, enormous markets, and mass buying.

Whether the pessimists or the optimists call the turn correctly, whether postwar business is good or not . . . as a G-E dealer you've got firm ground under your feet.

Three good solid assets . . .

First

you'll have an enormous reservoir of consumer acceptance for General Electric products. G-E Refrigerators, Ranges, Mixers, Toasters, and other G-E appliances, perking away year after year since long before the war, have given the kind of satisfaction that builds repeat sales.

The owners of these appliances are just waiting for the day when they can get G-E products again. As a G-E dealer, you will find this business coming your way.

Second

your customers . . . with savings piled up in banks and bonds . . . will be reaching out for appliances they've never had before—G-E Dishwashers, G-E Garbage Disposalls, G-E Kitchen Cabinets, completely automatic G-E Washers and Dryers, G-E Home Freezers, and other modern electrical equipment that will be well within the limits of their pocketbooks.

Third

you've got a good-sized following among appliance owners . . . built up by your own excellent repair work.

This repair work won't stop when the war is over—it will be a "bread and butter" business for your store in good times and bad.

And you can be sure that your reputation in repair work will translate itself into some healthy appliance sales, too, when you've got goods to sell.

A WINNING TEAM!

Every reliable survey shows that a good many consumer dollars are going to be spent for electrical appliances when the war is over. Just put the General Electric name up alongside the name of your store—and then get set for postwar business! General Electric Co., Appliance and Merchandise Dept., Bridgeport, Conn.

FOR VICTORY—General Electric is working night and day to back the attack. You can help, too, by buying and holding more war bonds than before.

TUNE IN: "The G-E House Party," every afternoon, Monday through Friday, 4 p. m., E.W.T., CBS. "The G-E All-Girl Orchestra," Sunday 10 p. m., E.W.T., NBC. "The World Today" news, every weekday, 6:45 p. m., E.W.T., CBS.

EVERYTHING ELECTRICAL FOR HOMES AFTER VICTORY

GENERAL ELECTRIC

Buensod-Stacey Acquires Page & Co. of Charlotte; Jesse Page to be V. P.

CHARLOTTE, N. C.—Page & Co., commercial refrigeration, air conditioning, and home heating firm here headed by Jesse W. Page, Jr., has been acquired by Buensod-Stacey, Inc., New York City air conditioning firm, and will be operated as the Page & Co. Division, announces Alfred C. Buensod, president of the parent firm.

Mr. Page has been elected vice president of Buensod-Stacey and will be in direct charge of the Charlotte operations, while R. O. McGary, also a vice president, will be in general charge of the company's southern activities.

OPA Man Joins Dealership

RICHMOND, Va.—Harry R. Duval, formerly with the OPA, has been named sales manager for Commonwealth Sales Corp. here, distributor of the Philco line, Premier cleaners, and L & H ranges and water heaters.

Western Distributor Named by Amana

HOLLYWOOD, Calif. — Appointment of Bauer-Knapp here as factory representative for Amana Society's line of refrigeration equipment in California, Oregon, Washington, Idaho, Utah, Nevada, and Arizona has been announced by George Foerstner, general manager of Amana's refrigeration division.

Partners and owners of the Hollywood firm are Bill K. Storey, president, and John J. Pollen, director of sales.

They will handle the complete Amana line, including a line of home freezers comprising three units: Model 50 with 5-cu. ft. capacity; Model 90 with 9-cu. ft. capacity; and Model 200, a combination freezer and cooler.

Coolerator Wins 'E' Award

DULUTH, Minn. — The Coolerator Co., peace time manufacturer of ice refrigerators, was recently presented with the Army-Navy "E" award of excellence in production.

Johnston Joins Coast Office of Weatherhead

JOHN P. JOHNSTON

* * *

GLENDALE, Calif.—John P. Johnston, for the past five years associated with Douglas Aircraft Co. as a research-designer of heating and air conditioning equipment for aircraft, has joined Weatherhead Co. as refrigeration engineer for the west coast office here.

Before coming to Douglas, Mr. Johnston spent six years in the heating and refrigerating industry, and was with Carrier Corp. in research and field engineering. A native of Chicago, Mr. Johnston is a member of the Institute of Aeronautical Sciences.

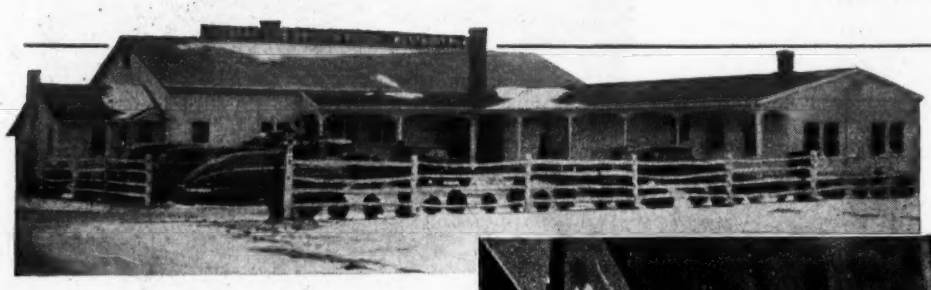
Glass Elected Chairman Of Central Jobber Group

CHICAGO—At the first meeting of the newly organized Central States Refrigeration Supply Jobbers Association held at the Stevens hotel here recently, Jack Glass of Chase Refrigeration Supply Co., Chicago, was elected chairman.

The group expects to concentrate on local problems affecting jobbers in this area. Another meeting is planned for the Stevens on March 30.

Present at the first meeting were H. S. McCloud, executive secretary of the national jobbers association; Irving Alter of Harry Alter Co., Chicago; H. W. Blythe of H. W. Blythe Co., Chicago; L. C. Keeley, Airo Supply Co., Chicago; J. B. McGuan, Automatic Heating & Cooling Co., Chicago; Gustave A. Larson, Gustave A. Larson Co., Milwaukee; P. Ravanesi of Service Parts Co., Melrose Park, Ill.; Dick Potter of U. S. Electric Co., Springfield, Ill.

"FREON" equipped locker plant ... a model of advanced design



Home of Country Life Frozen Foods, Inc., owned by Clinton G. Bush Co., N. Y.

• • •

G. Stuart Wishart, Mgr., demonstrates how patrons store food in lockers.

The attractive, rambling white farmhouse above is the home plant of Country Life Frozen Foods, Inc., at Westbury, Long Island, N. Y. It is considered one of the best equipped locker plants in the country.

Designed and built by the Bush Insulation Co. Inc., New York, the structure was opened in October, 1944. Plant facilities are of the latest design and provide a complete processing and locker service that won immediate acclaim. A growing waiting list of customers is evidence of its popularity, and the owners propose erection of a supplementary chain of branch locker depots.

"Freon" refrigerants are used exclusively because, states Clinton G. Bush, owner of the enterprise, "they are dependable, odorless and safe."

Chill, aging and locker rooms are held at temperatures ranging from zero to 32° F. Two 5 h.p. and two 2 h.p. Carrier Self-contained "Freon-12" Condensing Units serve these departments. Two additional 5 h.p. Carrier Units using "Freon-22" maintain a –30° F. temperature in the sharp freeze room. Zero temperature in a bulk storage department leased to a frozen foods distributor is controlled with a 2 h.p. Brunner and a similar Copeland unit. One Carrier Evaporative Condenser completes the compact installation. Duct work throughout eliminates sloppy defrosting.

When you have a locker plant job on hand . . . remember "Freon-22" is a "natural" for low-temperature refrigeration in quick or sharp freezing rooms. And for aging, curing and locker rooms, "Freon-12" provides dependable, trouble-free refrigeration you can recommend without hesitation. Write for complete information. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Del.

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"Freon" refrigerants are widely used in heavy duty air conditioning and refrigeration systems.

Most Families In Small Town 'Loyal' To Make of Refrigerator They Now Own

Wide Variation In 'Loyalty' Among Some Brands Noted In Warren, Ohio

WARREN, Ohio — Three out of four families in this trading area plan to buy a new refrigerator after the war—representing a total demand for 11,900 units, according to a market survey recently completed for the *Warren Tribune Chronicle,* daily newspaper here.

And of these, an average of approximately 77% of the owners will buy the same make of refrigerator now owned, although the overall percentages of "repeat" buyers will run from a low of 25% for one line to a high of 95% for another line.

The survey, conducted by the R. L. Polk & Co. of Detroit, is thought to be the first made in small areas, according to H. R. Farrall, *Tribune Chronicle* advertising manager.

Virtually all the families in the Warren trading area possess refrigerators, with mechanical units predominating. Of a total 16,600 families only 700 lack refrigeration of some sort. There are 12,500 mechanical refrigerators in use in 81.38% of the families. The 500 gas-operated units account for 3.26% of the total, while 15.36% of the families depend on ice, owning 2,360 ice boxes.

Large percentage of refrigerator ownership is divided by five leading makes. In Warren alone, these makes total 8,640 units, or 64.09% of the 13,480 in the community. One make represents 25.22% of all units in the town.

Owner "loyalty" among these five leading brands is high, ranging from 77.05% to 85.90%. The other three top makes have loyalty ratings of 80.64%, 80.33%, and 81.18%.

In addition to the high percentage of repeat buyers, a large number of families say they intend to buy one of these five brands after the war instead of repeating on their present refrigerator. Some of the less popular makes will suffer, if this intended shift to the leading brands actually occurs, according to the survey.

Two of the five leaders, in fact, have a possible replacement demand totaling more than their present ownership in the town.

Nearly two thirds of the refrigerators now in use in this area are five or more years old, the survey also shows. Approximately one third of the units, 35.66% (5,160 refrigerators) are less than five years old; 3,880 or 26.84% are from five to seven years old; 5,420 or 37.5% are over seven years old. Ages were determined on most of the refrigerators touched in the survey—14,460 out of 15,360.

Importance of the refrigerator in postwar planning of householders is indicated in the special study made of 1,860 families residing temporarily in housing projects, points out Mr. Farrall.

Refrigerators lead the list of "first choices" of new articles of furnishings to be purchased after the war by those families in temporary housing with 280 votes as the first purchase. Washers, incidentally, rank second on the "first choice" list with 260 purchases planned. Third place is held by rugs.

Lead position on the "second choice" list is also held by refrigerators with 160 planned purchases, while washers tie with stoves at 140. On the "third choice" list refrigerators and washers each have 40 votes.

Totaling first, second, and third choices gives refrigerators and rugs a tie for first with 480 votes. Washers were second on the grand total with 440 choices.

Ranges received 40 votes as first choice, but were not indicated on either the second or third choice lists.

What Brands Will They Buy?

Editor's Note: This exclusive report of the intensive postwar market survey made of Warren, Ohio, an average size community, is published in AIR CONDITIONING & REFRIGERATION NEWS by permission of the *Warren Tribune Chronicle,* and its advertising manager, H. R. Farrall.

Thought to be one of the first surveys ever made in such a small community, this study has additional interest for the refrigerator manufacturer in that it covers the potential buyer's satisfaction, or (in some instances) dissatisfaction, with his present refrigerator. Readers who wish to know how particular makes were rated by their owners are advised to get in touch with Mr. Farrall of the *Tribune Chronicle.*

Contract Awarded For New Super-Cold Building

LOS ANGELES — Contract has been awarded for construction of a new factory building of reinforced concrete at 850 East 59th St., Los Angeles, for the Super-Cold Corp.

The one-story building, to cover an area of 187 by 242 feet, will be equipped with three traveling cranes and a monorail and will cost $85,000.

Commercial Refrigerator Sales Keep Appliance Dealer 'Going' In Wartime

Service Work Over 200 Mile Area Around Duluth Provides Leads For 'Essential' Installations

DULUTH, Minn.—"For two years," says W. J. Collier, sales manager of the General Appliance Co., Duluth, "we have lived on refrigerated meat case sales.

"Before the war we had some commercial refrigeration work," Mr. Collier explained, "but when it was evident that household appliances, which had been our strong feature, would soon be out of the picture, we decided to go into this type of work extensively, concentrating on permitted replacements.

"We are one of the few shops doing refrigeration replacement work in this territory, which extends as far as the city of Superior on one side and down to Carleton County, to the half-way line out on the Miller Trunk leading to the Iron Range and from there up to the Canadian border, about 200 miles. For all of this area we give a commercial equipment service, sending our trucks and doing the work on the premises.

"Our sales efforts tie in well with repair and service activities. When we have serviced a piece of equipment, naturally when a replacement is necessary, it is our company that is thought of. The fact that through foresightedness we have commercial refrigeration merchandise on hand is an important sales factor, too. Customers will buy, whenever possible, where the only wait is for installation.

Out of the Back Room

"Formerly our household appliances were given display on our sales floor, our commercial equipment carried in back rooms. Now our commercial equipment is placed prominently on the street floor where it fills the entire front of the store.

"We have learned that display sells this type of equipment as well as it sells household appliances. Such display makes a vast amount of difference in establishing oneself in the commercial field.

"Our increased commercial refrigeration business plus our repair service, has kept our volume the same as it was before the war, despite the drop in household appliance sales.

No Furniture, Pictures

"We were determined to stay in the appliance field, not branching out into unrelated merchandise as so many in this field have done. We felt that adding furniture, pictures, and other merchandise would not help us in building for the future, since we would want to drop them as soon as appliances were again on the market. By staying within our own field we have opened up a good new business in commercial refrigeration, extending it far beyond our previous efforts. We shall continue this expansion in the postwar period.

"Such expanded commercial business will require larger space. Already we are planning to move into quarters three times as large as the ones we now have. The new building has a full basement, which we lack now. In this we shall set up facilities for full shop work in repair and service. Our workshops today are at the back of our street floor show rooms.

"Our layout will allow separate displays of household and commercial refrigeration equipment with accent on the latter. As a result of our experience in display of the commercial, we shall see that we have excellent commercial displays in our front show rooms."

As Mr. Collier stated, refrigerated meat display cases have been the shop's war-period stand-by. Stores featuring lunch meats for workers needed extra cases, and put them in to take care of the extra business which had developed in lunch-meats due to the ship yard and extra coal yard workers in the area.

Small Store a Prospect

OPA prices kept competition regulated so that many of the small stores found that they could handle the meats in volume as well as the large super-markets. Realizing the condition that existed, the General Appliance Co. advertised its meat cases extensively and gave them big play in store display.

Service work has produced a list of potential customers and their possible needs in the postwar period. Cards made out and kept in files carry memoranda of the model that was worked on, the style, and the record of the particular work done. At present, if other repairs are needed, reference to the card reveals what parts are needed.

The shop is fortunate in having three men associated in the business, all of whom do active work. These are Walter Swanstrom and Roy Hammerstedt, in addition to Mr. Collier.

Whenever it was possible to locate refrigerators they had been picked up, put into condition, and placed in the shop for resale. A year's guarantee is given to each purchaser.

The large show room displays at one side against the wall large cabinet-type units. Across from these, forming a traffic lane leading to the office at the rear, are the display cases. Electric ranges which are low enough not to block the view of the large refrigerated commercial units located beyond occupy the spaces immediately behind the windows.

The windows carry small home appliances to direct attention to the shop's repair work on small appliances.

When service is completed, these appliances are placed on shelves at the rear of the room at one side of the office section. Ticketed and in first class condition, they make a good report of what the shop has been able to do to keep the home appliances working during this critical time.

Freezing Cited as Boon To Shrimp Industry

BATON ROUGE, La.—Following a trip on *Betty Jean*, the only floating shrimp-packing plant in 7,000 square miles of shrimping waters, C. W. Dubois, Louisiana State university food preservation head, forecast a successful fight against spoilage.

Louisiana has a 3-million-dollar shrimp industry which annually suffers an eight to 10% loss from spoilage due to inability to keep the freshly-caught shrimp properly iced until ready for cooking.

Dubois, who was making experiments with various procedures in the handling of shrimp before freezing, reported that the *Betty Jean* could handle, pack, freeze, and store 60 tons before returning to land and that the vessel was supplied to remain out a month.

Freezing even eliminates the smell of shrimp, he said. The LSU preservation department reported after experiment that immediate removal of the shrimp heads aids the preservation.

New methods of handling involve sorting, removal of other forms of marine life and debris brought in with the nets, immediate heading, washing, packing in five-pound boxes, and freezing.

Following completion of experiments still underway and through use of new mechanical devices for handling and freezing, the department predicted that consumers all over the nation could enjoy out-of-the-water freshness and matchless taste quality. A postwar speed-up of transportation also will aid the shrimping industry, he said.

Slow Freezing Damages Vegetables, Say Cornell U. Research Experts

ITHACA, N. Y.—Extensive damage to vegetable tissues in extremely slow food freezing has been disclosed by microscopic examinations in laboratory work at Cornell university's School of Nutrition. Dr. L. A. Maynard and Dr. Willis A. Gortner explained that five freezing rates ranging from a few seconds to 100 hours are used in the continuing experiments.

Freezing rates are not extremely important for either meats or poultry but the rate may be important in freezing vegetables, as bearing upon vitamin changes, it was stated. Anything that depends on crispness, like lettuce, is unsuitable for freezing, Dr. Gortner said.

Breakdowns in tissue structure under food freezing are not visible to the unaided eye as very small structural changes result under exceedingly fast freezing. Worst results are obtained after packing freezers full of warm food without air spaces.

Questions still under study include the kinds of food suitable for freezing, possible vitamin losses in blanching water or during the freezing and thawing processes, and the time-limits for holding frozen foods.

What is true of any crop in one season may not necessarily hold in another, Dr. Gortner noted, which means that research must continue several years for practical value. In cooperation with workers at the Experiment Station in Geneva, the School of Nutrition is hunting the answers to the effect of the freezing process on vitamin losses, as well as the practical question of the suitability of various kinds of drinking water for blanching.

In general, these experts recommend holding frozen foods, such as berries, only from season to season. Noting that they have seen pork go rancid in five months, other pork good after 12 months when it was hastened to storage after slaughtering, they stress that all frozen foods should be harvested promptly, prepared and processed both quickly and properly and stored at the correct temperature.

It is hoped that Cornell test-work will provide the answers to such questions as the freezing of precooked foods. The researchers want to know to what extent leftovers may be preserved safely for future meals, to add variety—and find that mashed potatoes sometimes go watery when thawed.

Vegetable soup might be made economically in large amounts, with a generous holdover in the freezer for future family use.

They also look for answers to the puzzles of freezing pies and rolls prepared for baking, or baking them first. In such experiments, results are checked after a few weeks and again after several months, covering the temporary storage in the small freezer as well as possibilities of greater space and longer storage.

Frozen Food Expansion Seen In Arizona

FLAGSTAFF, Ariz. — Continued growth of the frozen food industry in Arizona is indicated by the expansion of a food wholesaling firm here and opening a new locker plant at Safford.

Crawley Brothers, distributor of Birds Eye and Booth brands of frozen foods and other food products, recently moved into larger quarters at 122 E. Aspen St. here. The firm is owned by D. C. Crawley and W. B. Crawley, but the latter is now a petty officer in the U. S. Navy.

In Safford, Weldon and Leslie Maloy recently opened the M. & M. Frozen Food Products and Locker Service with 335 lockers. All but 40 of the lockers were rented before the end of the opening week.

New Service Firm Formed In South Gate, California

SOUTH GATE, Calif.—Allied Refrigeration Service is the firm name under which Allen R. Payne and Stephen C. Enoch have published a certificate that they are conducting business at 3469 Tweedy Ave., South Gate, Calif.

Paul Waggoner Operating Firm In Los Angeles

LOS ANGELES—Waggoner Refrigeration Service is the firm name under which Paul B. Waggoner has published a certificate that he is conducting a refrigeration repairs business at 6007 West Pico Blvd., Los Angeles, Calif.

'Easy Selling' After War? Guess Again Says W. S. French

CHICAGO — Stiff competition for the consumer's dollar will come early in the postwar period, Willard S. French, president of Brooke, Smith, French & Dorrance, recently told the Chicago Federated Advertising Club.

Mr. French listed five important guideposts for postwar business planning to meet this competitive fight head on.

1. National income reaching new peacetime levels soon after the war.
2. A deep-seated (public) conviction that the cost of distribution is too high.
3. Startling, rapid changes in distribution methods.
4. Violent fluctuations in the geography of buying power.
5. A wider spread of national income among more and more people.

"It is reasonable to believe that early in the postwar period we shall find ourselves engaged in the toughest fight in the history of business for the greatest stakes in the history of business," he said.

He pointed out that American business immediately after World War I was over-optimistic and launched many products on the market. Then came a long, slow period of development and education, followed by a period of intense competition that resulted in a high business mortality and profits for those who survived.

"Because of tremendous technological advances in World War II, an even greater flood of new products more fully developed will be loosed upon the coming postwar market," Mr. French declared.

"The individual business must waste no time or energy on generalized conditions outside of its own control. The competitive situation will call for positive action carefully fitted to its own facilities, opportunities, problems, and hopes for the future."

Mill Supply, Plumbing & Automotive Jobbers Show Little Desire To Move In on Other Fields

However, Those Who Would Add New Lines Favor Appliances and Air Conditioning Equipment

NEW YORK CITY—After making a survey of 2,600 wholesalers in the hardware, mill supply, construction equipment, plumbing, electrical, and automotive supply fields, the publication *Modern Distribution* finds that only 54% are seeking new lines to handle in postwar.

Of those surveyed, 75% declare that in the postwar period they will not drop any of the lines they previously carried, which reflects on the efforts of manufacturers to hold together their distributing organizations during the war period.

New lines have been added by 37.5% since the beginning of the war. This is evidence of efforts to combat war shortages by means of diversification and to shift into lines which have been made more profitable by war conditions.

Questioned on nationally advertised vs. private brands, 73.6% pay a tribute to the effectiveness of advertising and sales promotion by indicating that, postwar, they will handle more nationally known brands. Ten per cent are inclined to handle fewer national brands. Only 8% intend to handle more private brands, but among these are a number who say they will also handle more national brands, indicating that a general expansion of their entire business is contemplated.

Many wholesalers qualify their statements somewhat by stating that they will give the small manufacturer thoughtful consideration if the right goods are available at the right price.

Pooled selling methods by small and medium-sized manufacturers will, of course, get results in many instances, so their position in relation to wholesalers is not so uncertain as the percentage figures indicate. Such manufacturers, however, are at a disadvantage compared with large manufacturers who can afford to reinforce their distributors' efforts with national advertising campaigns.

Plumbing suppliers, *Modern Distribution* reports, are being attracted by the possible profits in household appliances—"a doubtful field for those without experience in that type of merchandising." A majority of the 37% who said they would add new postwar lines elected home appliances. Second choice was air conditioning equipment.

Sneeden Has Raleigh Office

RALEIGH, N. C.—A district office has been opened in the Professional Bldg. here by Sneeden York Co., York distributor. Jos. S. Mitchiner is manager-engineer in charge.

West Penn Power Co. Expands Training Plan

PITTSBURGH—To meet the demands of repair men and dealers, who were so enthusiastic about the refrigeration training schools conducted during the past two years, a service training school on electric ranges has been organized here by West Penn Power Co. in cooperation with the state department of public instruction.

The first range school was started recently at the Monessen Vocational School under E. G. Fields, instructor, with nearly twenty enrollees. Full attendance despite bad weather indicates the interest in the series, it is reported.

Like the refrigeration courses, the range service school combines instruction in theory of operation and principles of service with actual work on electric ranges furnished by cooperating dealers in the vicinity.

As soon as facilities are available, other classes will be organized in the area, say West Penn officials.

Gov't Outlines New Procedures For Occupational Deferments

WASHINGTON, D. C.—A whole new set of Selective Service procedures affecting occupational deferments is now in operation, and the Office of Manpower Requirements of the WPB has just issued advices to employers to become familiar with these new procedures if they wish to obtain further deferments for employes now having occupational deferments.

AIR CONDITIONING & REFRIGERATION NEWS has discussed these new procedures in the last two issues. However, since the Office of Manpower Requirements has done such a good job of presenting the information in a concise and usable manner, the editors are presenting some of the information which they give. Keep in mind that the procedures vary by age groups (18 through 29, 30 through 33, and 34 through 37), and that the "Certifying Agency" will be the War Production Board. Following is the resume:

The revised bases for occupational deferment are as follows:

1. **Registrants under 30 years of age.** A registrant age 18 through 29 may be retained or placed in Class II-A or Class II-B if the Local Board finds that he is "necessary to and regularly engaged in" an activity in war production or in support of the national health, safety, or interest and that he is irreplaceable and indispensable thereto.

Employers in such activities are requested to submit Form 42A (Special-Revised) to the appropriate Federal Government agency having jurisdiction over his activities for certification or denial of certification of requests for deferment of registrants in this age group.

Employers may file Form 42A (Special-Revised) with the local board even though certification has been denied by the Federal Government agency having jurisdiction or if the employer does not come within the jurisdiction of any Federal Government agency.

The Local Board will consider the certification as authoritative information that the Federal Government agencies charged with the prosecution of the war have agreed that the registrant is indispensable and irreplaceable. Local boards will give Form 42A (Special-Revised) so certified most serious consideration.

As a basis for determining which registrants, ages 18 through 29, may be certified for occupational deferment, each employer for whom the WPB is a Certifying Agency must submit to the WPB District Manager of the area in which his employes are located:

(1) A list (see Form) in triplicate of all men currently in his employ who on Jan. 1, 1945, were in the age group 18 through 29 and on that date classified as 2A or 2B. (The list should not include those known to be classified as 2A (L), 2A (F), 2B (L), 2B (F).

The list must be arranged in order of importance of each man to the manufacturer's operation, the most essential irreplaceable man coming first and the rest listed in descending order of importance. The list must include:

(2) Two sets of Form 42A (Special-Revised) for each registrant for whom the employer feels he must obtain deferment.

The WPB District Manager will certify Form 42A (Special-Revised) in accordance with the following criteria:

(1) No man can be certified for deferment unless he is doing work that is indispensable in an activity that is included within the WMC List of Essential Activities.

(2) No such indispensable man can be certified for deferment if he can be replaced by a worker doing less essential work within the plant or establishment, or by recruitment from without.

(3) Any "Indispensable" man shall be considered as replaceable if a recruit or transferee is available and can be qualified to perform his work by three months of intensive training.

(4) Men engaged in planning, research, development, or production for postwar purposes, shall not be certified for deferment.

The WPB District Manager will forward to the registrant's local board the Form 42A (Special-Revised) which he certifies. He will return to the employer all sets of Form 42A (Special-Revised) which he does not certify.

Local Boards may receive from employers directly Form 42A (Special-Revised) which do not bear the certification of an authorized Federal Government agency either because such certification has been denied or because the employer does not come under the jurisdiction of one of the agencies listed above.

Registrants for whom such uncertified forms are filed will be considered for occupational deferment only if the Local Board or the Board of Appeal determines that the registrant is "necessary to and regularly engaged in" and is indispensable and irreplaceable in an activity in war production or in support of the national health, safety, or interest. The opportunity of local boards to permit additional deferments to those certified by an appropriate Government agency will, of course, be limited by the requirements of the armed forces.

When the Local Board receives a **certified** Form 42A (Special-Revised) for a registrant regardless of his current classification or whether an order to report for induction has been issued, it shall immediately reopen and consider the registrant's classification anew.

When the Local Board receives an **uncertified** Form 42A (Special-Revised), and finds that the registrant is "necessary to and regularly engaged in" and indispensable and irreplaceable in an activity in war production or in support of the national health, safety, or interest it shall reopen and consider the classification anew if the registrant is in Class II-A or II-B. If the registrant is in Class I-A, I-A-O, or IV-E, it may reopen the case only if an order to report for induction has not been issued.

Since it may take until April 1, 1945, for the new Form 42A (Special-Revised) to be filed with Local Boards, present Form 42A (Special), Form 42A and other occupational affidavits now on file remain in effect until replaced by Form 42A (Special-Revised), or until April 1, 1945, or until the period of deferment requested expires, whichever occurs first.

After April 1, 1945, the Local Board will reopen and consider anew the case of every registrant age 18 through 29 still remaining in Class II-A or II-B for whom it has not received Form 42A (Special-Revised) even though the current deferment of the registrant has not expired.

2. **Registrants ages 30 through 33.** Registrants ages 30 through 33 will be classified in Class II-A or II-B only if the Local Board finds such registrants "necessary to and regularly engaged in" an activity in war production or in support of the national health, safety, or interest. The revised War Manpower Commission List of Essential Activities shall be used to determine whether the registrant is engaged in an "activity in war production."

Form 42A may be used for making requests for the occupational deferment of registrants in this age group.

Under these terms the deferment of men 30 through 33 will be on a more generous basis than the deferment of men 26 through 29.

3. **Registrants ages 34 through 37.** Registrants ages 34 through 37 who are found to be "regularly engaged in" activities in war production or in support of the national health, safety, or interest may continue to be classified into II-A or II-B. The revised War Manpower Commission List of Essential Activities shall be used to determine whether the registrant is engaged in an "activity in war production."

Form 42A may be used for making requests for the occupational deferment of registrants in this age group.

(Concluded on Page 13, Column 1)

WMC Recognized For Job Well Done

War Manpower Commissioner Paul McNutt (second from right) accepts for WMC a plaque presented by the National Refrigeration Service Council in recognition of the assistance received from WMC's Bureau of Training in the program of training refrigeration repairmen. Others are (left to right) Harry Alter, member of the Council; W. Ray Kromer, Council chairman; and John Tessari of WMC, who played a large part in getting aid from government agencies for the training program.

New Procedures In Effect on Deferments

(Concluded from Page 12, Column 5)

6. **Consideration for fathers**—If all other factors are equal, fathers over 25 years of age will be accorded occupational deferment in preference to non-fathers in the same age group.

LOCAL BOARD PROCEDURES

1. **Requests for deferment.**—The employer who wishes to request occupational deferment for an employe should use Selective Service Form 42A (Specialized) whether or not certified by one of the Government agencies listed for registrants under 30, and Form 42A for registrants 30 years of age or over. **It is exceedingly important that such a form be on file for every registrant in a company's employ for whom deferment is believed to be justified.**

Some older men originally may have been deferred without the filing of an occupational affidavit, or such forms as were filed may be incomplete or fail to describe the registrant's current employment status. Moreover, occupational deferments are for a period of six months or less. At the end of that time, local boards reconsider the classification of all deferred workers.

It is recommended therefore that employers make sure that a currently complete form is on file for each registrant under 38 years of age, including those physically disqualified or qualified for limited service only, for whom he wishes deferment along with up-to-date occupational affidavits and other pertinent data.

In filling out these forms, it is to the best interest of the employer to give full and detailed information. Unless such information is provided, the possibility of favorable action is seriously reduced. The following suggests the type of information which is pertinent.

What is the exact nature of the employe's duties and particularly his individual responsibility?

What is the degree of training, skill, and experience required for this registrant's replacement, including such factors as the necessary periods of schooling, shop training, or apprenticeship?

What efforts have been made to obtain acceptable replacements or trainees through the U. S. Employment Service, other employment agencies, or other recruitment activities of the employer?

What definite steps have been taken to train replacements for this individual registrant?

What action has been taken to break down the duties of the registrant's job so that less skilled workers can take over?

What is the exact relation between the registrant's duties and particular essential or critical activities of the employer? Will the loss of this registrant directly affect essential or critical production and to what extent?

These forms should be accompanied by references to any official releases or regulations, such as the List of Essential Activities which indicate the company's claim to essentiality. If there is any question concerning whether the activity in which the registrant is engaged falls within one of the activities specified in the List of Essential Activities, certification of coverage of this activity may be requested from the local office of the War Manpower Commission.

The United States Employment Service may be requested to certify to the unavailability of qualified workers to replace the registrants for whom deferment is asked.

After the employer has filed the proper forms he is entitled to notice of the subsequent classification action taken by the Board.

2. **Appeals.**—Although every possible effort should be made to present all pertinent facts in the initial stages of the Selective Service procedures, it may be necessary to appeal the action of the Local Board.

If the request for occupational deferment is denied and the employer is notified that the employe has been placed in Class I-A, the employer, if he filed the original request for the registrant's deferment, may file an appeal within 10 days after the date of the notice.

Such appeals are filed by the employer with the registrant's Local Board, which in turn forwards the case to the board of appeals in the area in which is located the principal place of employment of the registrant. The employer should consult the Local Board regarding the forms and procedures to be used. No new evidence may be presented in the appeal.

Any registrant is entitled to request a personal hearing before the Local Board if he so desires, and if it is felt that the written evidence before the board may not be complete. If the Local Board then reclassifies the registrant out of Class I-A, the appeal is automatically dropped.

Attached to each Local Board is a governmental Appeal Agent whose duties are to appeal from any classification of the Local Board which, in his opinion, should be reviewed by the Board of Appeal, and to suggest to the Local Board a reopening of any case where the interests of justice require. It may be helpful for employers to consult the Appeal Agent in preparing an appeal.

In the event the Appeal Board affirms the Local Board decision, but the vote of the Appeal Board is not unanimous, and the employer is convinced that grounds exist for further consideration, the employer may appeal to the President.

If the decision of the Appeal Board is unanimous, the case may be brought to the State Director of Selective Service by the employer with a request for review to determine whether the case should be reopened by the Local Board for reconsideration, or whether appeal to the President by the State Director is warranted.

Occupational advisers attached to each State Director's headquarters are available to review occupational cases and advise registrants and employers of their rights as well as their responsibilities.

In the event the State Director declines either to request the Local Board to reconsider or to take a Presidential appeal and the employer has reason to believe the case has not received thorough consideration by the Local and State Selective Service Agencies, then he may send the case to the Director of Selective Service, Major General Lewis B. Hershey, 21st and C Streets, N.W., Washington, D. C., with a request for review, but only after all other procedures have been exhausted.

If the assistance of the War Production Board is desired, a copy of the material in the case should be sent to the appropriate Industry Division or to the Office of Manpower Requirements. In all such cases, prompt action is necessary and the following information must be supplied:

(1) Employe's Selective Service classification, date of such classification, previous occupational classification, if any, age, and marital status.

(2) Date of appeal and the vote, split or unanimous, of the Appeal Board.

(3) Employe's occupation and detailed description of his duties, including skills and previous training.

(4) The date of induction, if order to report has been issued.

(5) The date of referral to the State Director and his decision, if any.

(6) Complete explanation of employer's efforts to train, upgrade, or obtain a replacement. It is the employer's responsibility to exhaust every possible effort to replace men liable for military service under the law.

Selective Service regulations provide that a registrant may not be inducted if an appeal is filed during the 10-day period allowed for appeal of his classification, or during the time such an appeal is under consideration.

How To List Men 18-29 For Deferment

(Information to be Submitted by Employer)
Employer's list of registrants

Name of Plant or Establishment .....

Address of Plant or Establishment .....

Certifying Agency .....

Date of Employment (as of January 1, 1945) .....

Name of Registrant	Date of birth	Occupation	Selective Service Order No.	Local Board	Present Selective Service Classification

It is certified that all men listed above
(a) Were classified 2A or 2B on January 1, 1945, and were on that date in the age group 18 through 29.
(b) Are now in my employ.
(c) That such list has been submitted to no other Certifying Agency.

....
(Date) (Signature and title of Company Official)

This reporting requirement has been approved by the Bureau of the Budget pursuant to the Federal Reports Act of 1942.

New Law To Block 'Industrial Selling' and Other Unfair Sales Practices Up In N. Y.

ALBANY, N. Y.—Pending in the New York State Legislature is a new fair trade practice bill which describes its purpose as to outlaw unfair and fraudulent competition and unsound and uneconomic methods of distribution that mislead a purchaser into believing he is buying merchandise at substantially below regular retail prices when in fact he is not.

Introduced (Feb. 27) by Senator Walter J. Mahoney of Buffalo and Assemblyman Harry A. Reoux of Warrensburg, both Republicans, the bill was drafted and is being advocated by the New York State Council of Retail Merchants and the New York Council on Retail Trade Diversion.

A similar bill was passed by the Legislature a few years ago, but vetoed by former Gov. Herbert H. Lehman. Last year a bill of the same general nature was approved by the Senate but died in the House. The new measure contains modifications intended to remove objections of prior drafts.

A joint statement by the sponsors explained that the bill's primary purpose is to protect small distributors and the consuming public. It was pointed out that New York State merchants do 10% of the nation's retail business and that similar statutes are currently effective in Ohio, Minnesota, Illinois, Pennsylvania, Wisconsin, and Michigan.

Referring to the practices which the bill seeks to eliminate as "parasitic," the statement asserted that the measure "in no sense attempts to regiment business."

"It does," the sponsors added, "seek to prohibit deceit and misrepresentation in distribution, nothing else. The measure cannot harm or even affect any honest man in any way. It is aimed at neither individuals nor classes, but it does strike at the heart of dishonest trade practices.

"It will not prohibit a wholesaler or manufacturer from selling at retail. It has no bearing on any legitimate mail order house or cooperative concern. It will not fix prices in any way."

The proposed legislation would require manufacturers, wholesalers, and brokers who sell at retail as well as at wholesale to list themselves as retailers as well as manufacturers, wholesalers, or brokers. It would prohibit false representations, orally or in writing, with regard to the selling price of merchandise or the merchandise itself, and it seeks to regulate sales to employes.

In a supplemental statement Arthur L. Garniss, executive vice president of the New York Council on Retail Trade Diversion, explained that the bill would plug loopholes in existing statutes and should help keep under control the disposal of war commodities. He said the bill has the support of several score trade and civic groups of the state, representing about 50,000 retail establishments.

Sales to employes, known as "industrial selling," is particularly disturbing to established retailers because it leads to consumer deception, Mr. Garniss said. The bill provides that an employer who directly or indirectly sells or offers to sell merchandise that he does not make or regularly deal in to his employes must employ persons "qualified and experienced in the knowledge and judgment of merchandise"; shall be "able to certify and shall certify as to the price, quality, ingredients, or origin of merchandise so sold"; and shall not make or permit to be made false, untrue, deceptive, or misleading representations as to selling price or "savings as against the cost" of such merchandise elsewhere.

Violations of the proposed measure would be punishable as misdemeanors, involving possible fines up to $500 for the first offense. Subsequent violations would be punishable by fines of not less than $500 nor more than $1,000.

Philco Executive Says Dealer Organization 'Is Practically Intact'

PHILADELPHIA — Philco's reta dealer organization today is pra tically intact and ready to resum distribution when war conditions pe mit the resumption of civilian pro duction, J. M. Otter, sales manage for the Home Radio division of Philo Corp., reports after an extensive tri through the Middle West and Sout

"Our dealers have come throug the war crisis with flying colors," M Otter finds. "Everywhere I went was the same story: nearly ever one of our Philco dealers was st doing business at the same old stan In fact, Philco distributors told m that many dealers who were not i their former places of business h moved, but to larger and bett locations."

The war years have not been ea for dealers, Mr. Otter admitted. substituting new lines of merchandi many of which Philco helped the obtain, to replace appliances d continued by war, 'however, most the company's dealers not only su ceeded in staying in business b learned a great deal as well.

Personalized Letters Bring Good Orders for Service Work to Penn. Operator

EAST LIBERTY, Pa.—Personalized letters to refrigeration service customers sent out in volume starting a year ago have brought a "big response," reports Harry A. Bortz, 5452 Penn Ave.

From the first thousand letters, 30 orders resulted. Several were "good-sized" ($175-$225) jobs and came immediately, says Mr. Bortz; other orders "have been coming in right along. The returns compensated very well for the effort."

Beginning last March, 25 letters were mailed out daily to 2,000 commercial customers.

"It takes months to make up a letter," says Mr. Bortz. "We continually change the wording." Factors in judging the letters are:

1) Must not sound like high pressure.

2) Must *show* customer we are thinking of him.

3) Must not brazenly try to change the prospect's thinking, but let him know we're in business to give service.

Letters are so well done, people actually call Mr. Bortz to tell him they have received their letter.

Typical letter reads (in part):

"Dear Customer: In order to facilitate handling your service calls I am operating a shop and service room at . . .

"Besides giving you the best possible service, our store will be opened for your convenience from . . .

"Featured at reasonable prices will be the following . . . for your refrigeration needs.

"When the time for Victory comes, I will be able to serve you with . . . for your home and business. Sincerely yours."

Relying for his livelihood solely on service since he started out in 1931, Mr. Bortz keeps very up-to-date by trying out new ideas.

Mr. Bortz recently composed and mailed out 1,000 letters to farmers within an 18-mile radius in Allegheny County.

To prevent useless backtracking, Bortz's service man working the farm district in a car stocked with 95% of his equipment, phones the office from each stop having a telephone. Calls to the office average three daily. For emergencies, the serviceman's daily schedule is posted at the office.

Cleveland Firm Draws WPB Suspension

CLEVELAND — Under an agreement between the Downtown Store Fixture Co. here, store fixture dealership and refrigeration service firm, and the War Production Board, a two-month suspension of the firm's priority privileges went into effect Jan. 27 for violations of Preference Rating Order P-126 and Order L-38.

According to WPB, during the months of June, July, and August the firm improperly applied AA-5 MRO ratings for the purchase of material totaling approximately $7,395 for equipment and materials which was not used, as intended, for emergency repair and maintenance of refrigeration systems.

The firm was also charged with receiving during the same months seven walk-in coolers and 18 condensing units without furnishing an approved order, thus violating L-38.

Balfour Co. Opens New Service Department

CHICAGO—The A. E. Balfour Co., distributor of the Bastian-Blessing line of soda fountain equipment, has opened a new service department, at the Boston offices, 88 Brookline Ave.

Mr. Balfour states that the service department is now prepared to render refrigeration and repair service on soda fountains, ice cream cabinets, and carbonators of any make. Repairs and replacements are carried in stock to prevent shutdowns.

Fulton Forms New Service Firm In Los Angeles

LOS ANGELES — American Refrigeration Service is the firm name under which Donald A. Fulton has published a certificate that he is conducting business at 2102 Sunset Blvd., Los Angeles, Calif.

'Informal' Bidding For Surplus Gov't Property Will Be Dropped

WASHINGTON, D. C.—"Informal" bidding for government surplus property will be supplanted in the near future by a more formal and uniform procedure, indicates the Office of Surplus Property of the U. S. Treasury Department's Procurement Division.

In addition, the Treasury is writing into its sales contracts a clause which permits cancellation by the government of any sale made to any bidder who acted on behalf of an undisclosed principal. This move, said Treasury officials, is intended to discourage "speculative transactions" by persons falsely representing themselves to be agents for unnamed business houses."

Under the new bidding procedure, prospective bidders who indicate an interest in surplus property which has been advertised for sale by any regional office or department will be furnished bid forms containing detailed descriptions of the property and advised of the day and hour when bids for such property are to be opened.

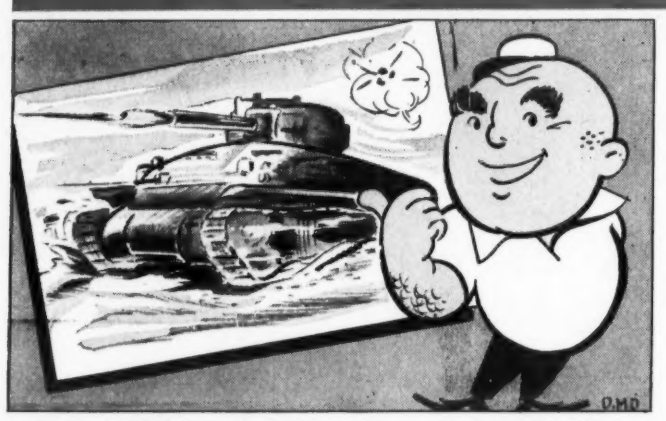
Bidders will be entitled to be represented at the opening of their bids. Former practices of opening bids as received and of offering property without a definite closing time for the submission of bids are to be discontinued.

The methods employed will closely approximate those used in competitive bidding for government purchases.

They'll Do It Every Time . . . . By Jimmy Hatlo

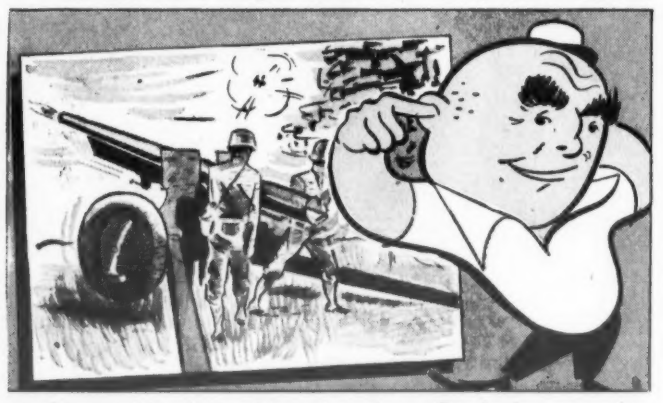
Back the Attack - - - - - Buy War Bonds

BUNDYWELD AT WAR



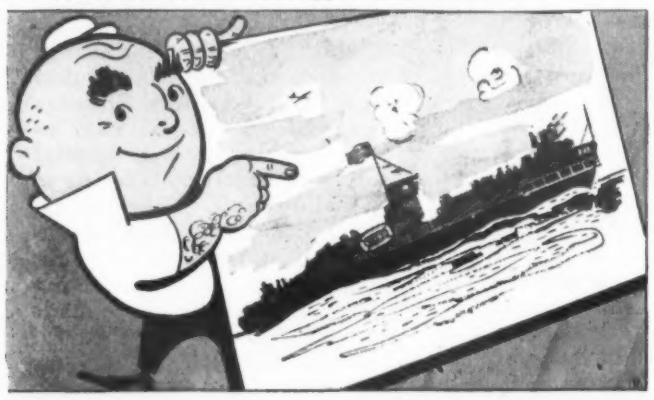
1 On battlefronts throughout the world Bundy tubing is seeing action. Army tanks, bulldozers and tractors use Bundyweld for gas, oil and brake lines as do armored reconnaissance cars, weapon carriers and many other vehicles.

2 All types of fighting equipment use Bundyweld . . . from jeeps to planes, from tank destroyers to parachutes. Army trucks including Diesel cargo, oil service, gun tractor and bomb service trucks plus many others depend on Bundyweld

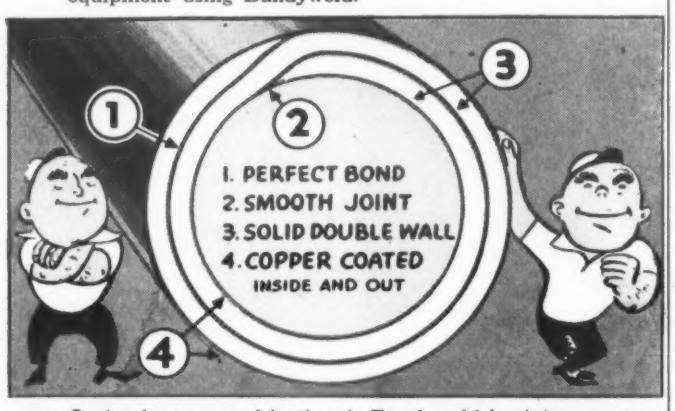


3 Ammunition for artillery depends on Bundy for percussion primers and burster tubes to set off the charge. Bundy tubing is also used for vital parts in incendiaries, bazookas, rocket bombs and other types of ammunition.

4 Hot rations are supplied to our men in battle from Army field stoves equipped with "life lines" of Bundy tubing. Food and water are kept cool and pure with refrigerating equipment using Bundyweld.



5 Diesel powered landing craft use Bundyweld for fuel and oil lines. Even smoke screens laid down by destroyers and PT boats depend on Bundy tubing! Planes, too, use Bundyweld for vital "life lines" and important primer tubes.



6 On land, at sea and in the air Bundyweld is giving constant proof of superior performance. For ways in which it can be used on your war or peacetime products, consult Bundy Research and Engineering Departments, Detroit 13, Mich.

BUNDY TUBING

ENGINEERED TO YOUR EXPECTATIONS

BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES:

Pacific Metals Company, Ltd. 3100 19th Street San Francisco 10, California

Standard Tube Sales Corp. 1 Admiral Avenue Maspeth, New York City, N. Y.

Lapham-Hickey Company 3333 W. 47th Place Chicago 32, Illinois

Rutan & Company 112 South 16th Street Philadelphia 2, Pennsylvania

Eagle Metals Company 3628 East Marginal Way Seattle 4, Washington

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Great New Market Beckons Pioneers

PRIMARY job of a "Voice-of-the-Industry" publication su as AIR CONDITIONING & REFRIGERATION NEWS has apparent become is to report and *interpret* current trends within t various professions which, when combined and integrated, ser to form and maintain our important industry.

A secondary function is that of detecting, sensing, a publicizing *future* trends, possibilities and potentialities for th industry.

This function is one which is seldom accorded prop weight.

Most of us—particularly in these days of manpower sho ages—are unable to keep abreast of our present duties.

Suggestions as to future needs, requirements, and pos bilities may attract our interest momentarily. But the physi impossibility of adding extra hours to our presently overcrowd working day forces us to push aside into the "call-up fi many ideas which, in normal times, would intrigue us mighti

Such is the case with the tremendous potentialities inher in newly discovered uses for refrigeration in the alleviation human suffering.

Here is the hottest news of our generation so far refrigeration engineers are concerned. Most refrigeration en neers are fascinated by the subject when it is brought their attention.

Yet there is so much to do, and so much necessar left undone, in the course of trying to meet today's requirements, that the NEWS can't find anybody in the indus who has done much experimenting in this promising—and u mately rewarding—new field.

Somewhat to our surprise, an article on refrigera anesthesia came in "over the transom" not long ago. It rela to experience in this new art recorded by Dr. R. T. F resident physician in surgery at Miami Valley Hospital Dayton, Ohio, and Dr. William S. Clark, director of this hospit Department of Physical Medicine.

This article was published on page 23 of the Feb. 1945, issue of AIR CONDITIONING & REFRIGERATION NEWS.

Exceptionally interesting in itself, this article conclu with the following challenging statements by Dr. Fox:

"We are still using the crudest type of refrigera applications on our patients. The result is an extremely h nursing cost, as the ice packs must be changed constantly b before and after the operation.

"We hope that the refrigeration industry will deve the type of equipment that will be needed by surgeons physical therapists all over the country, both for refrigera anesthesia, and for the treatment of many pathological conditi

"Naturally, many problems of temperature control involved, but we believe that the refrigeration industry has skill and the equipment available to meet this situation, the best minds of the refrigeration industry are set to w on the problem."

There you are. Refrigeration stands on the thres of becoming an integral part of a new science, a new indus a new market, a new and greater usefulness.

What are we going to do about it?

Success of Air Conditioning Application May Depend on the Architect's Knowledge

Buensod Urges Architects to Study Basic Data So They Can Design A. C. Systems Themselves

Editor's Note: Architects in New York City recently sponsored a panel discussion on air conditioning problems as they relate to the planning and designing of buildings. First half of the report on this meeting appeared in the Feb. 26 issue of the NEWS. The following article concludes the discussion.

By C. Dale Mericle

The viewpoint of the air conditioning contractor as to the importance of the architect to the air conditioning industry was presented by A. C. Buensod, president of Buensod-Stacey, Inc., well known contracting firm in New York City and Charlotte, N. C.

"The architect is morally and fundamentally, in the interests of the client and for his own welfare, responsible for the type of system; the coordination of the system with his architecture and the results which the owner has good reason to expect when and as he purchases air conditioning," declared Mr. Buensod.

"The architect has the first contact with the owner and on the basis of confidence alone the owner has retained him, and, therefore, it is obvious that if he is not acquainted with good air conditioning installation technique, it would be wise to retain as consultants engineers qualified to design and advise as to the best type of system to be used.

"It is realized, of course, that on various small projects the value of the project does not permit the inclusion of sufficient retainer fees for both architect and a consulting heating, ventilating, and air conditioning engineer, and the tendency has been to obtain information direct from manufacturers of such equipment or their agents. This, of course, may lead to many conflicting conclusions and if price is the criteria it can usually be said that trouble is to be expected.

"Experience with many types of air conditioning, both small and large, has led me, and others in the industry, to believe that a little different approach for the owner's interests is desirable; as time goes on and the experience is well disseminated and technical information is digested, many architects would be well qualified to include in their design the air conditioning," Mr. Buensod said.

"There are many sources of information now available for some of the basic data that anyone would need in order to be competent to design an air conditioning system. The guide of the American Society of Heating & Ventilating Engineers has practically everything known in our line of air conditioning design, methods, and factors, that have been experienced. There is still a gap in the use of this data and obtaining the results which only experienced installation men can arrive at.

"The Heating, Piping and Air Conditioning Contractors National Association has, for over 50 years, been engaged in raising the standards of the contracting business and recently their Engineering Standards, Part IV, were revised for comfort cooling air conditioning.

"This Part IV of the Standards has, in addition to all the useful data for design, a practical example of the calculations required for any air conditioning system for comfort and if this knowledge can be assimiliated by the architect, and perhaps even by the owner, some of the difficulty of choosing on price consideration alone would be eliminated.

"The industry itself is cognizant of the fact that they have an educational program on their hands in teaching the many new outlets that are going to engage in the air conditioning business the fundamentals so necessary to know before installation and, further, that after the job is installed it is necessary to have continuous service available to the user and at present there are very few competent technicians available throughout the country.

"It is fortunate that we now have a national organization which has as its business principally the dissemination of the knowledge above mentioned and the policy which is quite necessary to get the story across. This organization is the Indoor Climate Institute and feels that they have one of the most responsible and important tasks for our own industry.

"The war period has emphasized to a much greater degree than in ordinary times the value of proper service, if not the value of proper design in the first place although the second somewhat over-laps, but when the owner has machinery or systems that do not function he naturally becomes much annoyed and is further seriously distressed when competent technicians to remedy the troubles are not to be had. Our own organization has had to refuse, during this period, to take on any outside service work because of the depletion of

(Concluded on Page 19, Column 1)

Factory-Assembled Systems 'Tailored' To Individual Applications Predicted

(Concluded from Page 18, Column 5)

his service staff during the war.

"We've always had an inspection service available for clients for all air conditioning and for the past seven or eight years we have continued to inspect on a monthly basis, for a nominal fee, systems which we install, principally to try to anticipate further troubles and keep the system running. It has worked splendidly.

"We also know that other organizations are doing the same service on their equipment and some organizations have taken on a further step that, for a stated contract price, they will service and maintain systems. This is a very progressive step and is worth the cost to any user who cannot employ competent operating engineers."

'Dirt Causes Most Failures'—Leopold

Charles Leopold, the Philadelphia consulting engineer who has designed air conditioning installations for such applications as the huge Pentagon Building near Washington, D. C., told architects that "the predominate cause of failure of well designed air conditioning systems is dirt in the systems."

Many such failures could be prevented with installation of adequate air cleaning apparatus, he believes. In addition, the continued development of air sterilization methods may eventually add this operation to the average system, he predicted.

He too predicts changes in the postwar cooling equipment. Use of new materials will probably lead to redesigning of reciprocating compressors to increase their speed as the size is reduced, he believes.

"There is also a large field for development between the large central type systems and the small unit coolers," he said. "We may find that medium size package air conditioning equipment will in the future be created at the factory out of subassemblies and will be more or less tailored to individual applications.

"Factory-assembled units are generally much better than systems erected in the field, and in addition, will be less expensive," declared Mr. Leopold.

Belief that air conditioning will continue to grow after the war was supported by Mr. Leopold. Many people now working in air conditioned factories and offices, for example, will demand it in postwar shops, theaters, and homes, he said.

"However," he pointed out, "in the New York suburban (not city) areas satisfactory results may possibly be achieved in the average home through use of adequate insulation and attic fans. Window units, though, are likely to be used for comfort on extreme days."

Department Stores Plan $60 Million For Air Conditioning After War

NEW YORK CITY—More than $60 million of a projected billion-dollar modernization outlay will be devoted to air conditioning installations in retail stores, according to a survey recently made among members of the National Retail Dry Goods Association.

The survey in general indicates that stores are mapping a "course of courageous and dynamic action" in their postwar planning, stated Saul Cohn, president of City Stores Co. and chairman of N.R.D.G.A.'s postwar planning committee, which sent questionnaires to member stores.

Biggest expenditures will be for additions to or expansion of present buildings and the addition of new branch stores. Of the total planned expenditures 30.9% will go into additions and another 11.1% into branches, according to the survey.

Third largest item is escalators, with stores proposing to devote 10.5% of the total modernization fund to this purpose. Fourth item, totaling 10.2%, covers purchase of new fixtures, while air conditioning expenditures will account for 6.2% of the total.

"The replies to our questionnaire indicate clearly that retail stores will have a tremendous volume of expenditures to make after the war for improvements, replacements, and modernization, and in some cases expansion of their plants and fixtures," said Mr. Cohn.

"A large proportion of these expenditures will represent deferred maintenance, the things which ordinarily retail stores would undertake on a yearly basis but which, because of the war, they have been unable to do. There is scarcely a store plant in the country which does not need redecorating, additions to fixture accounts, and the replacement of many facilities which have undergone severe wear during this emergency period.

"It must be recognized that not all retailers can immediately plan to expand their plants," he pointed out. "War activities and large movements of population from some localities to others have operated to create spotty conditions. . . .

"When the end of the war comes, there probably will be a second shifting of population, and it is fair to assume that in those places which have had the greatest increases in retail volume it may actually be necessary for some stores to curtail rather than expand their facilities. In many other places, however, leading retail stores will be planning enlargement of their present facilities."

Water Heater-Washer Tie-in Sales Expected

CHICAGO — Postwar dealers of automatic laundry equipment will very likely aim for "tie-in" sales with automatic water heaters, believes Fred C. Margolf, manager of the home laundry sales division of Edison General Electric Appliance Co. (Hotpoint) here.

"This will not stop the sale of automatic washers; it will create a market for millions of automatic water heaters," he predicts.

Immediately after the war, there will be probably a greater demand for conventional washers, but as improved automatic machines come on the market in greater quantities, they will possibly outsell standard models eventually, thinks Mr. Margolf.

Hotpoint, which produced a limited number of electric clothes dryers before the war, will be out with an improved model as soon as restrictions are dropped, Mr. Margolf announced.

The postwar unit will be a tumbler type of table-top height with an electric heating element. Tumbler will keep the clothes in motion constantly.

Plans for dealers include merchandising methods designed to promote the sale of complete laundry ensembles, according to Mr. Margolf. While customers may not be prepared to buy all the appliances at one time for a complete laundry, they will be urged to arrange the puchase of one unit at a time, he said.

Alabama Furniture Dealer Signs for Leonard Line

MONTGOMERY, Ala. — Mathews Furniture Co. here, took a five column advertisement in the newspapers to announce that it had been appointed exclusive dealer in Montgomery for Leonard refrigerators, ranges, and home freezers. It invited housewives of Montgomery to be its guests on the day the appliances become available and to see "something you can see nowhere else in the city."

3 Detroiters Form Norge Outlet In Los Angeles

LOS ANGELES—Norge Appliance & Sales Co. of California, Inc., has been organized in Los Angeles, with 100 shares of no par value capital stock.

Directors are: M. G. O'Harra, John Park, and Don Grant, all of Detroit, Mich.

Steve Dennis Opens Firm In Adrian, Michigan

ADRIAN, Mich. — Steve Dennis, formerly active in the refrigeration field in Jackson, Mich., has opened his own firm here under the name Adrian Refrigeration Sales.

Toaster-Cooker Unit Planned by Calkins

C. V. CALKINS

* * *

SOUTH BEND, Ind.—The "Breakfaster," a combination toaster-cooker, is one of the innovations which will be available in postwar for housewives and others living in small kitchenette or kitchenless apartments. It is designed to prepare toast and coffee simultaneously, being a small sized hot plate and grill.

It is manufactured by Calkins Appliance Corp.

Weighing about two and a half pounds, it is chromium-plated and can be easily moved about by attractive, plastic handles which form the base. It operates from any electrical outlet using 110 a.c. or d.c. current.

Calkins Appliance Corp., which developed and markets the Breakfaster, is headed by C. Vernon Calkins, as president and general manager. He recently resigned as vice president in charge of sales of Bendix Home Appliances, and previously was with Kelvinator and RCA.

The other two officers comprising the board of directors are C. C. Harrah, vice president, and L. O. Zick, secretary and treasurer.

* * *

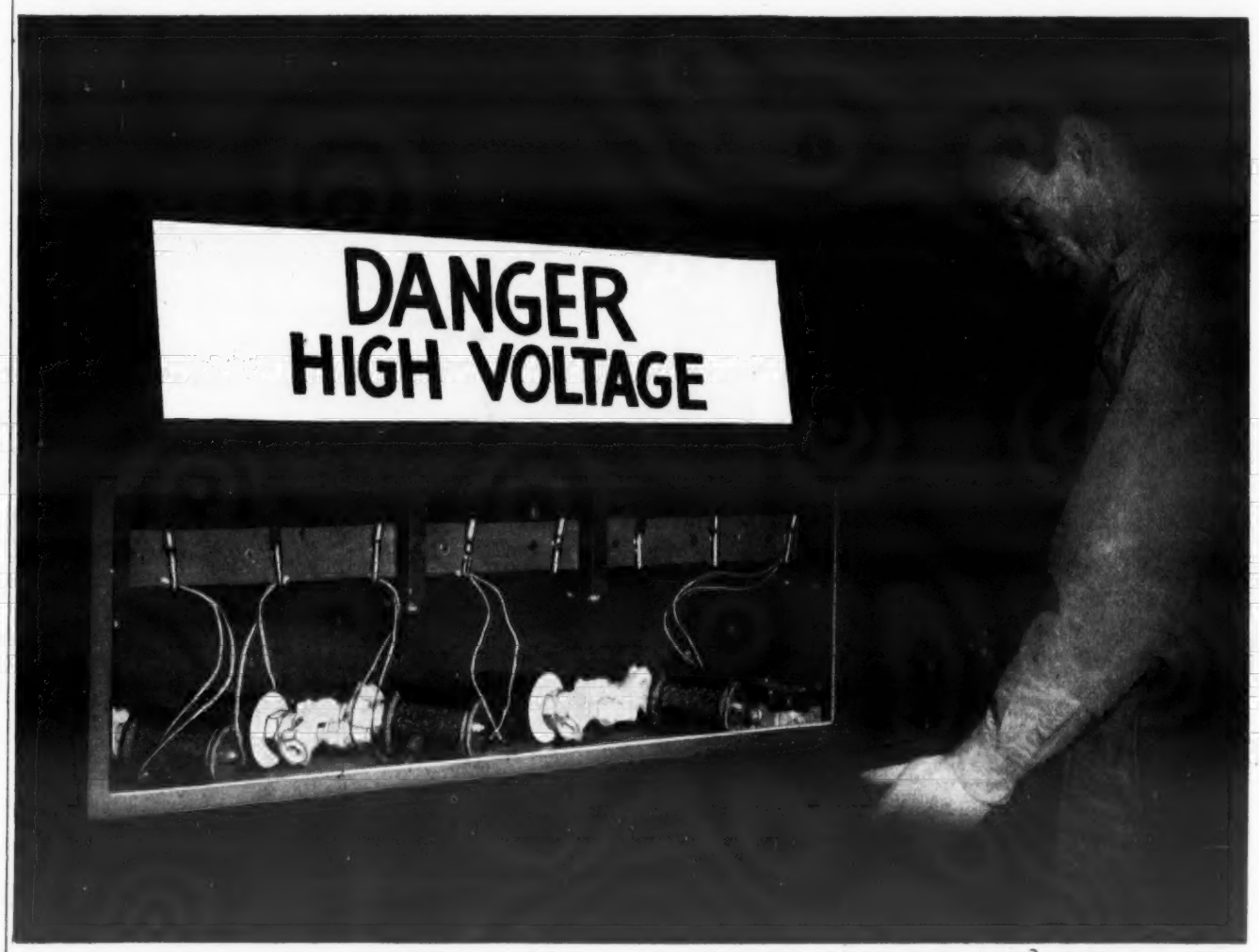
How the "Breakfaster" works.

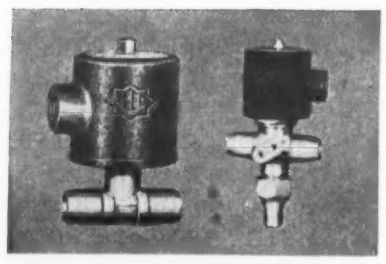
U. S. Army Engineers Use This Guide For Trouble-Shooting

Editor's Note: The following trouble-shooting guide for refrigerating and air conditioning units was prepared for use of U. S. Army engineers located in camp installations and combat areas and published in *The Maintenance Engineer,* a publication of the War Plans Division, Office, Chief of Engineers, with whose permission it is reprinted in AIR CONDITIONING & REFRIGERATION NEWS for the benefit of civilians and interested members of the Armed Forces.

This guide covers only common failures and their probable causes. Corrective procedures are detailed in other publications of the War Department.

OBSERVED CONDITIONS	PROBABLE CAUSES
1. Compressor fails to start.	May be caused by: gas engine or power failure; action of low pressure or high pressure cutout or temperature controls; excessive head pressures caused by air in condenser; cooling water supply failure. In colder climates may be due to extremely low temperature in machine room.
2. Hissing noise at expansion valve; low suction pressure; warm suction line; bubbles showing at liquid indicator.	Shortage of refrigerant. Determine location of refrigerant leak before adding to system; test seal first.
3. Compressor short cycles; suction pressure drops rapidly just after compressor starts; low-pressure cutout shuts off compressor; warm cooling coil; sweat or frost at outlet of expansion valve.	Obstruction in expansion valve. Valve may stick closed or be clogged by ice, wax, or dirt. Capacity of valve may be too low.
4. Same as No. 3.	Leaking power element in expansion valve. Leak in thermal bulb, capillary tube, bellows, or diaphragm will maintain valve in closed or partly closed position. To test element, loosen bulb and warm in hand. Valve will remain shut and compressor will not start if element has lost its charge.
5. Suction line sweats excessively; crankcase may be cold and may sweat.	Expansion valve stuck in open position. Often due to loose bulb or bulb in too warm location.
6. Compressor short cycles; outlet side of solenoid valve may be colder than inlet side, may even sweat or frost.	Leaking solenoid valve. Refer also to No. 3.
7. Liquid line on the outlet side of strainer or dehydrator colder than line on inlet side (line may sweat or frost).	Clogged strainer or dehydrator. Refer also to No. 3.
8. Liquid line colder at outlet side of liquid line valve.	Partially closed valve. Refer to items 2, 3, 6, and 7.
9. Pipe beyond certain point in liquid line cold (line may sweat or frost); compressor short cycles through action of low-pressure cutout; evaporator coil and suction line warm.	Obstruction in liquid line; flow of refrigerant slowed down or stopped.
10. Part of coil and suction line warm.	Insufficient liquid passing expansion valve. Refer also to 2, 3, 4, 7, 8, or 9; check for proper size and type valve.
11. Head pressure and condenser temperature rise; high-pressure cutout stops compressor; compressor then short-cycles; electric motor may stop through action of thermal overload element.	Insufficient heat removal at condenser. If system is water cooled, condition may be caused by faulty operation of automatic water valve; clogged valve strainer, dirty condenser, or insufficient water flow. If system is air cooled, condenser may require cleaning, or fan belt may be loose. Presence of non-condensable gases will also raise head pressures as will high surrounding temperatures in equipment room. When belt is too tight (or low voltage occurs) motor may overheat and cut out on thermal overload.
12. Leak at shaft seal; leak evidenced by presence of oil at seal; gas leak detected by soap solution and halide torch.	May be due to low oil level in crankcase. Lack of oil causes excessive wear on seal. Refrigerant loss results in symptoms mentioned in 2 and 3.
13. Oil leaves crankcase.	Caused by partly worn pistons, rings, cylinders, or by improper operation of oil return check valve on suction side. Also caused by improperly set expansion valve (opening too wide or too restricted), or by loose thermal bulb. Prompt correction will prevent wear of moving parts and seal.
14. Noisy compressor; insufficient refrigeration; high suction pressure; lack of compression.	Leaking, worn, or broken suction valves. Valve plate can be removed and replaced without disassembling entire compressor on most models.
15. Suction pressure rises rapidly on the off cycle; compressor short-cycles or operates continuously; refrigeration effect reduced; intermittent slight movement of the flywheel just after unit has shut down.	Leaking, worn, or broken discharge valves. Since the discharge valves also serve as check valves between the high side and the low side, a leak at this point will be indicated by a rapid rise in suction pressure.
16. Noisy compressor—pressure normal; compressor may pump oil.	Loose flywheel; loose base bolts; worn pistons; worn bearings; worn or broken valves.
17. Noisy compressor — suction line frosted.	Expansion valve bulb not firmly attached to suction line; superheat set too low; expansion valve stuck open; liquid refrigerant returning to compressor. Refer also to 5.
18. Noisy compressor—suction pressure drops.	Sudden reduction of suction pressure will cause oil slugging. Condition may be due to: expansion valve sticking in closed position; non-operation of solenoid valve because of electric current failure; formation of ice (due to moisture in system)—or wax (from poor grade of oil) at valves. If moisture is present, dehydrators should be recharged. Refer also to 3 and 4.
19. Noisy compressor — head pressure high.	Noisy operation can occur when head pressures are extreme and when high-pressure cutout is inoperative. May also be caused by presence of air or other non-condensable gases in system or by overcharge of refrigerant. Refer also to 6.
20. Warm refrigerator space.	Occurs when both suction and head pressures are higher than normal. Condition caused by: too great a load; excessive air leakage through refrigerator space; excessive usage; open or partly closed door; frosted evaporator. Also refer to 2.
21. Excess amount of oil in crankcase.	Compressor will be noisy due to oil slugging. May also be the cause of an apparent loss of refrigeration capacity.
22. Head pressure may rise so high that either high-pressure cutoff or the thermal overload element stops the compressor; after unit has been shut down long enough to bring all parts to room temperature and water to condenser (if water cooled) is shut off, high-pressure gage reads more than 10 psi above the pressure corresponding to the temperature of the surrounding air.	Air in condenser. To purge, pump all of the refrigerant into the receiver and condenser. Stop the compressor and cool the condenser by operating the fan (in case of an air cooled system) or allow the cooling water to flow for about an hour in order to condense as much of the refrigerant as possible. After this, open the purge valve for an instant and then close. Repeat several times at intervals of one to two minutes. Some refrigerant is always lost in purging. No practical test can be applied to determine when all non-condensable gases are eliminated. Entire procedure should be repeated from time to time until head pressures return to normal. Refer also to 19 and 23.
23. High head pressure. Head pressure rises until high-pressure cutout or thermal overload element stops compressor.	Too much refrigerant (surplus refrigerant will back up into condenser and lower its efficiency); lower half of condenser will be much cooler than upper half.
24. Noisy compressor; suction pressure high; discharge pressure will be low.	Broken valves. In multi-cylinder compressors, the difference in temperatures of the heads facilitates localizing the trouble.
25. Frosted coils in air conditioning unit.	When temperature of air entering coils is 80° F. or higher and the coil temperature is above 25° F. no frost will form. If blower type unit, fan may be off or below normal speed.
26. Frosted coils in cold storage box.	When box temperature is 36° F. or higher and coil temperature is 25° F. or higher, merely a light frost (if any) will occur, and this will disappear during off cycle of the compressor. Heavy frost may be caused by cycling control set for lower temperature or pressure than necessary; or air circulation may be restricted.





Schenk Named Alco's Chicago Engineer

ST. LOUIS—John A. Schenk has been appointed field engineer of the recently reopened Chicago office of the Alco Valve Co., manufacturer of air conditioning and refrigeration control valves.

Mr. Schenk previously managed Alco's Chicago office from 1936 until it was closed by war restrictions in April, 1942. Since that time he has been at the home plant here, where he handled priority material allotments and production coordination, and later served as application engineer.

The Chicago office, located at 866 Civic Opera Building, 20 North Wacker Dr., will carry no stock.

L. K. Wright Heads School At New York City 'Y'

NEW YORK CITY—L. K. Wright, formerly chief engineer for Refrigeration Corp. of America here, is now in charge of the refrigeration school conducted by the West Side Y.M.C.A. Trade & Technical School here.

The school, which Mr. Wright started in 1932, has extensive plans for training courses for both civilians and members of the Armed Forces, and is developing these courses in cooperation with New York State University.

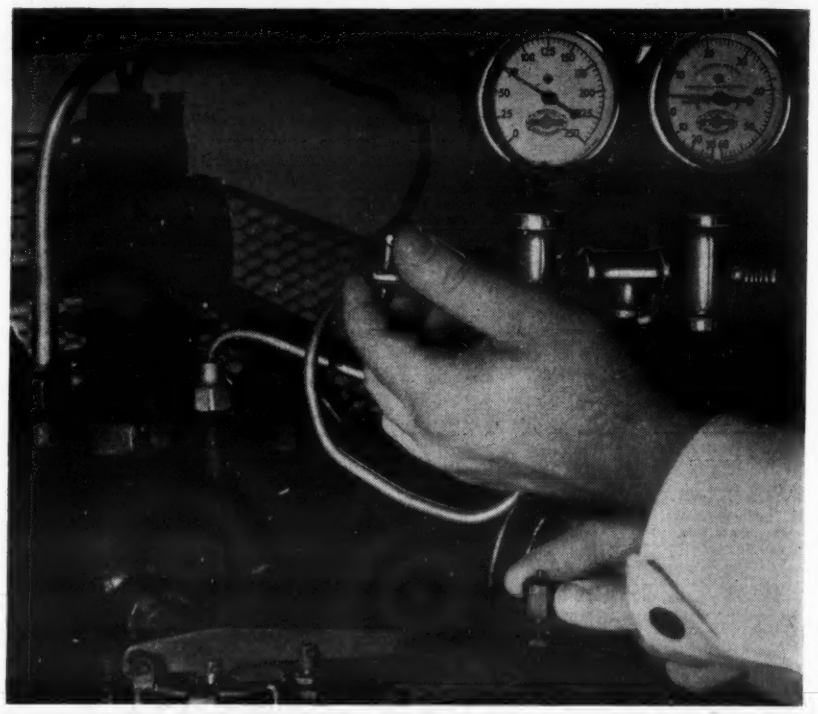
Mr. Wright also plans to offer a consulting service on locker plan design and equipment as well as low temperature applications and processes.

Servicing Frigidaire Open-Type Systems

Instalment No. 5

Editor's Note: The information given in this series of articles pertains directly to Frigidaire open-type household systems, but these service hints should prove equally useful in work on Frigidaire water coolers, beverage coolers, ice cream cabinets, and other commercial units, since the systems are similar. The series was prepared through the cooperation of the service department, Frigidaire Division, General Motors Corp.

18—How to Make Cutting-In Adjustment



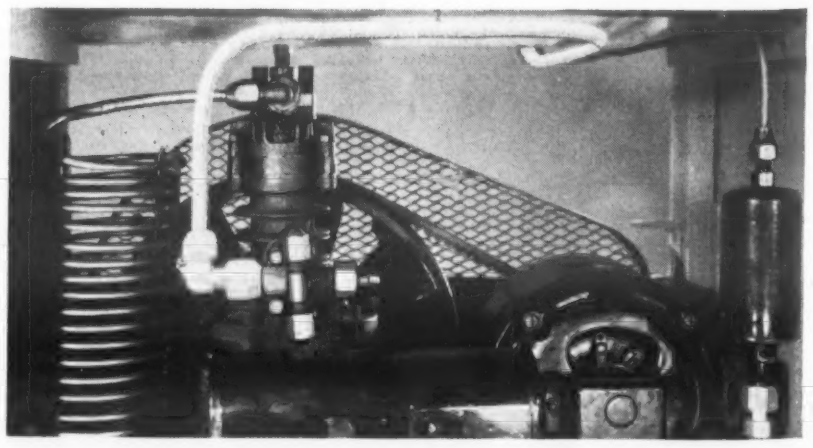
Open both gauge valves slightly, and turn cutting-in nut to obtain desired cutting-in point.

It is an easy matter to build up the pressure to determine the cutting-in point of the switch. Simply open both valves on the gauge slightly so as to by-pass high pressure into the low pressure side, and thus operate the switch. The cutting-in adjustment nut is turned counter clockwise to lower the cut-in point and clockwise to raise it, and is shown being adjusted while the discharge gauge valve is being opened. It is only logical that since this adjustment can be made independently of the cutting-out point, the switch should always be set sufficiently low to cut the unit in before the ice melts in the ice trays.

One more important point to remember: be sure always to check cabinet temperatures with a thermometer after making switch adjustments. For it is only by the use of a thermometer that exact temperatures can be determined. A dial or pocket thermometer will tell the temperature story truthfully and eliminate all guesswork.

The tube of the dial thermometer or the pocket type itself should be placed on a centrally located cabinet shelf, to obtain the reading at this point. It really pays to check temperatures with a thermometer. It will save plenty of work and worry in the long-run.

19—Changing Float Valves—Reasons Why



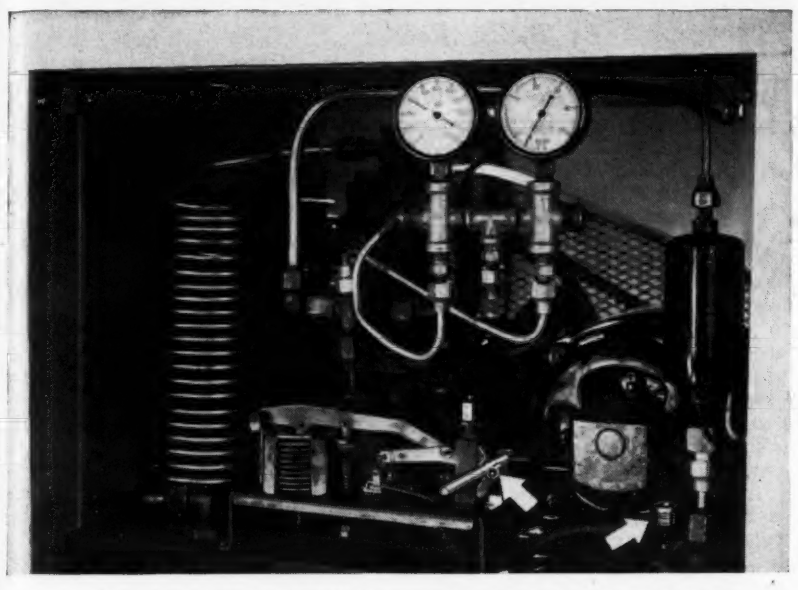
A defective float valve can cause many service complaints.

Since the function of this valve is to maintain the correct amount of refrigerant in the freezer, its importance is easily understood. For this reason, the changing of float valves is one of the more common service operations, with which every service man should be thoroughly familiar.

Just to illustrate how it can effect the operation of the system, a stuck-shut float will result in a complete lack of refrigeration, while a leaky float valve will cause the suction line to frost, as indicated in the photograph, and result in poor refrigeration. In view of this, learn how to diagnose these symptoms expertly. When it is found that a float must be changed, the first step is to—

Servicing Frigidaire Systems

20—Changing Float Valves—First Step



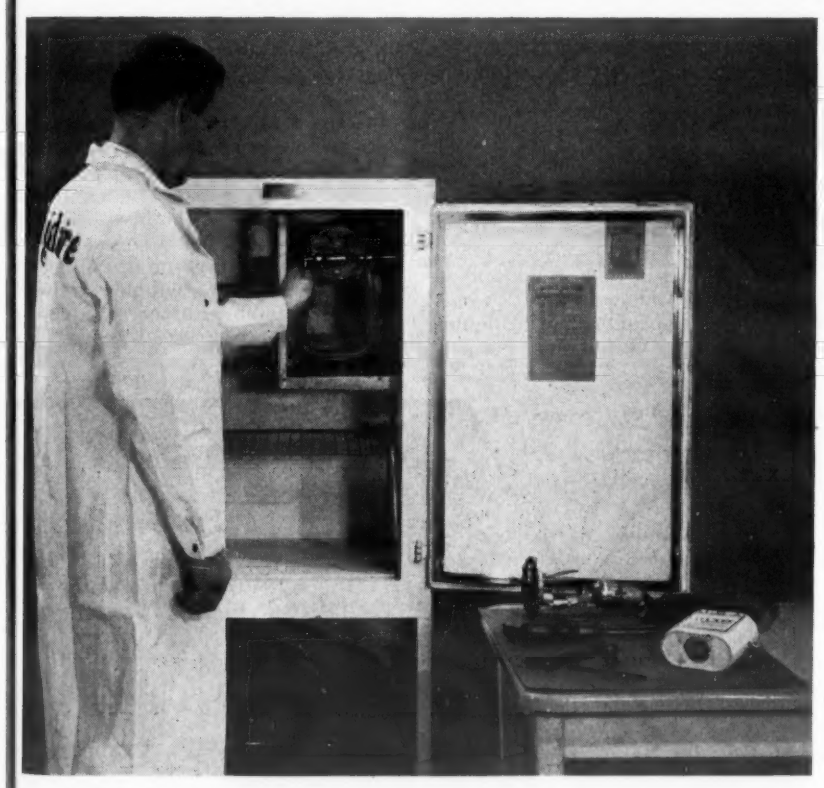
Close receiver liquid line valve, and block switch closed.

Having thus shut off the supply of refrigerant from the condensing unit, it is now necessary to remove the SO_2 from the freezer. To do this, pull as deep a vacuum as possible by blocking the switch shut with a pencil, as illustrated in the photograph. This will keep the condensing unit in continuous operation.

Although the absence of frost from the freezer indicates that the latter is free from refrigerant, it is suggested that the unit stand idle for, say, five minutes. If the vacuum reading still holds by now, it is certain that the freezer is empty. If not, the unit should again be run and the test re-made.

When certain that there is no refrigerant in the freezer, the receiver liquid line valve can be opened to build up ½ lb. pressure and the compressor shut off. Filling the trays with hot water will hasten the pump-down.

21—Changing Float Valves—Second Step



Next leave the compressor and close freezer valves. This is done by removing the caps from both valves, which will give access to the valve stems. Now remove the float valve. However, first, always be sure to keep tools and materials handy during this operation, for in order to minimize the effect of refrigerant odor in the user's home, the valve should be changed as quickly as possible. For this reason, have all tools and materials needed within easy reach. For added precaution, take foods from cabinet, remove pets and flowers from room, and have gas mask convenient.

Second, care should be taken to keep from losing oil from the freezer, either by blocking up the front of the cabinet or by removing the rear suspension bolts and leaving the back of the freezer down. It is also suggested that a cloth be placed under the boiler to catch any excess oil that may be trapped in the flanges. Having taken these precautions, remove header bolts—

Army Refrigeration Problems

By P. B. Reed
Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Finding & Preventing Refrigerant Leaks (2)

SCREWED JOINTS

Borrowing from ammonia practice, the electric refrigeration industry formerly used screwed joints more extensively than today. It is quite difficult to make a pipe-thread joint perfectly tight without soldering it and this type of joint is avoided wherever practicable. Where it must be used, one way that has been found fairly satisfactory is to tin the threads and then make up the joint cold, and this coating of tin seals the threads. This is frequently used on oil or drain plugs especially in cast iron housings.

Litharge and glycerine, if made up fresh just before using, is fairly effective if the joint is to be permanent, but such joints are preferably sweated. If possible, the plug and the part into which it screws should be of dissimilar metals, such as a brass plug in an iron body. The tendency is away from tapered pipe plugs. Straight thread plugs with gaskets are being used instead.

In the early years of electric refrigeration, a good deal of trouble was due to cracked or "pulled" flares. Most of this was due to the copper itself. It was hard and did not form a flare without strain and as a result, a crack formed. Also much of the tubing was not seamless and a split in the flare occurred at the seam. Some of the trouble was due to the type of flaring tools which consisted of a block and a punch that was hammered to form the flare. Too thin, uneven, too long, or too short flares resulted.

Much of this type of trouble has been eliminated by the soft, ductile tubing now supplied and the better types of flaring tools, although some care is still required in order that strong even flares may be produced. Forged nuts and especially the short shank and frost-proof types have greatly reduced the number of cases of split nuts, pulled flares, and closed tubes.

GASKETS

Leaks occur at gasketed joints from several causes.

1. Cap screws or bolts loose. Sometimes they work loose due to their being made of comparatively soft steel that is not heat-treated and therefore stretches. This is especially true on the heads of compressors which are alternately hot and then cool.

2. Gaskets that are not resilient are compressed when the metal is hot and do not expand again when the metal cools, thus leaving a slight space between the gasket and the metal faces. This is especially noticeable with metal gaskets which "flow" instead of giving and then returning to original thickness.

3. Some gasket material is porous and allows seepage of refrigerant or oil. It is not suitable for refrigeration purposes although perhaps satisfactory for a water pump or other device for which it may have been originally developed.

4. Gaskets are attacked by acid in the system (produced from water and refrigerant) or harmful liquids or other substances put into the system. It is sometimes advisable to moisten composition gaskets with clean compressor oil to soften them so that they will more readily fill into scratches or indentations of the metal faces.

5. Metal surfaces may not be properly finished—rough, pitted, or tool marked, or having some of a former gasket left on them.

The best protection against leaks is to use care in installing or servicing the equipment so as not to have leaks in the first place. Most leaks are avoidable and are the results of some one just not being careful enough.

FIND LEAKS

The next best thing to avoiding leaks is to find them promptly if they do exist and then fixing them. There are few times when it is excusable to give the job a "shot" and go ahead without making much attempt to find the leak. If a job that has been previously satisfactory is low on refrigerant, it's a sure thing that there is a leak.

If refrigerant is simply added and the leak not fixed, it is refrigerant, work, time, and money wasted, for it will have to be done over and eventually someone is going to have to find the leak and fix it.

A NO-BUBBLE VACUUM

One of the best methods of preventing leaks or rather of being sure that a new installation doesn't have leaks is to pump a "perfect vacuum"—a "no-bubble" vacuum and then shut-off the compressor and let it stand a half-hour at least on the deep vacuum. If, when it is again started up no air shows through the oil, you can be reasonably sure that there is no leak in that part of the system.

A "no-bubble" vacuum is so called because when pumping a vacuum, a tube is run from the compressor discharge to a clean bottle containing a small amount of compressor oil and the end of the tube immersed in the oil. If the compressor is still pumping air, it shows as bubbles in the oil.

It is common practice to purge out

(Concluded on Page 25, Column 1)

Methods of Detecting Refrigerant Leaks

(Concluded from Page 24, Column 5)

the lines and evaporator of a new installation, but that method has three weaknesses. 1. It does not provide a leak check. 2. It does not remove all of the air. 3. It does not remove moisture. A "no-bubble" vacuum takes more time but it pays dividends in the long run.

Even after a "no-bubble" vacuum is obtained and the charge of refrigerant is let into the low-side of the system, it should all be tested for leaks. There may have been a few joints in the condenser, receiver, or other parts of the system on which the vacuum was not pumped.

The leak-test should take place when there is a good pressure in the system—at least 50 psi (pounds per square inch) so as to be sure that the amount of refrigerant being leaked is enough that it will be picked up by the leak detector.

In some cases, the refrigerant alone may not give enough pressure to insure adequate leak detection. This is especially true if the evaporator is cold. In such instances, add to the refrigerant pressure with pressure from a carbon-dioxide cylinder. Nitrogen can be used but NEVER use oxygen.

A good plan is to put 50 psi pressure in the coil with the refrigerant, then shut off the valves and connect a CO_2 drum and a gauge and build up the pressure from 50 psi to as high as is safe for the coil—say 200 psi. Then go over the coil for leaks, and if you wish to be extra sure let the coil stand 24 hours with the 200 psi in it. It shouldn't drop more than a pound or so which may be caused by temperature change (more if it is a cold coil and it warms up).

Another effective test is to put a pressure of 200 psi on the coil and put it under water in a tank that is brightly illuminated. Leaks will be visible as streams of bubbles, sometimes so fine as to be easily overlooked, rising through the water. Kerosene is sometimes used instead of water. This submersion method is suitable only for shop use and then only for coils, condensers, receivers, compressors, or other assemblies.

For the halogen refrigerants, the "Freons" and methyl chloride, the most practical leak test for field use is the Halide torch of which there are two chief types: the one that burns methyl-alcohol and the Prestolite torch. Either is effective but the smaller the flame the greater the sensitivity and the Prestolite type can be turned to a very low flame for maximum sensitivity.

Go over ALL joints including those made at the factory. Check all plugs, gaskets, and any other place that might conceivably leak. Leaks have been found in the casting of a compressor, at the end of a shaft, in the middle of a piece of tubing, and other places that would not often be even suspected.

Go over the joints **slowly** with the exploring tube. Go all around the joint, not just one side. When testing a shaft seal turn the fly wheel slowly and try all around the seal. And above all, if you know that the system has lost refrigerant and therefore has a leak, **don't give up** until you find it. In the long run, it is the cheapest way and the easiest way.

For systems charged with sulphur dioxide, test for leaks with an ammonia swab on a wire or stick. Use 26% ammonia. Weaker ammonia such as household cleaning ammonia is not strong enough to insure finding small leaks. Bring the ammonia soaked swab near the joint, all around it. Swab ammonia directly on the joint if there is any question as to whether the joint is leaking.

A white "smoke" from the swab indicates that some sulphur has come into contact with the ammonia and that there is a leak.

Before using the Halide torch or the ammonia swab see that the room around the equipment has been ventilated and that there are no refrigerant fumes in the air to confuse you.

There is still another method for detecting leaks that, if carefully used is effective in detecting even very small leaks of any kind of refrigerant. It is the soap-and-water method. To be effective, the soap-and-water solution must be made up sometime before its use so that there are no bubbles in it and it is just a thick, slimy, ropey consistency. When spread on a joint, it is tough and clear and bubbles can be seen forming under it in the case of tiny leaks.

Each joint must be fully covered with the solution and examined under a strong light—an extension cord is better than a flash light. The back side of a joint or other places not directly visible can be examined with a small mirror such as are used in a woman's "compact." Some service men use dental mirrors.

Whatever the method that you use in testing for leaks, the main things are to FIND AND FIX THEM.

Danger of Allowing Refrigerator Motor To Overheat Outlined for Detroit A. S. R E.

Veinott Describes Thermal Protective Devices

By C. Dale Mericle

DETROIT — "Don't overload an electric motor when it is operating at the minimum rated voltage," warned C. G. Veinott of Westinghouse Electric & Mfg. Co. in a recent talk before the Detroit Section, American Society of Refrigerating Engineers in the Rackham Bldg. here.

A general discussion of the problem of overheating electric motors designed for both open and hermetic type refrigeration units was presented by Mr. Veinott, who is section engineer of the special products section of the small motor division at the Westinghouse Lima, Ohio, works.

Describing how disc type thermostats are employed to protect motor windings in the event of overheating, Mr. Veinott emphasized that the design of the motor and the type of the switch and thermal overload protection comprise one problem rather than three individual problems.

2 LOADING FACTORS

"There are two factors which determine the maximum loading of a motor: torque and temperature," said Mr. Veinott. "With inadequate torque the motor simply stops, and that, in itself, will not damage the motor. But as soon as the motor stops it will begin to heat up.

"Because the motor stops it is easy to detect inadequate torque, but it is much more difficult to detect rises in temperature. Overheating shows up eventually in the shortened life of the motor. In fact, an increase of 10° C. in the temperature of motor windings halves the life of the winding insulation and thus the life of the motor," he declared.

"Probably the worst condition of overheating for a motor occurs when the motor operates at a point just below the lowest temperature at which the thermostat trips out."

OPERATION OF THERMOSTAT

Operation of the thermostat was described at some length by Mr. Veinott. In a motor intended for an open type refrigeration unit, the thermostat disc is located at one end to react to temperature changes in the motor end windings, he said.

Heat in the motor windings is readily conducted through the copper wires from the stator core to the end windings, and usually there is no more than 5° to 10° C. difference in temperature between core and end windings. On some occasions, though, this difference may reach 30° C., he declared.

Heat from the windings is also conducted by the iron parts of the motor, but there is considerable lag here. For this reason a small electric radiant heater is employed to heat the thermostat above the temperature of the bracket within the motor to which it is attached. Thermostats are selected so that they closely follow the temperature of stator end windings and cut off the current when the temperature reaches a predetermined point, usually 120° C.

ADVANTAGES OF DEVICE

According to Mr. Veinott, this method of protecting a motor against overheating is much more effective than the current overload device. The latter device would sometimes allow a rise of as much as 50° C. in motor windings without shutting off the motor, he said.

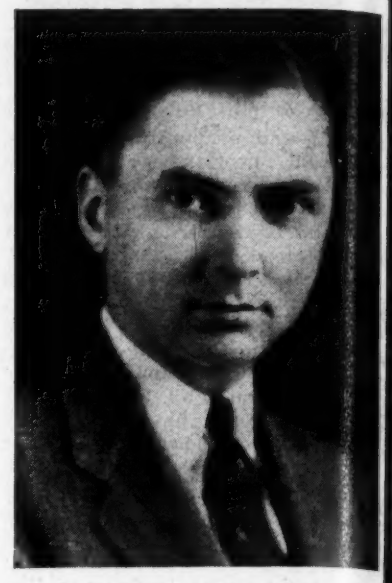
"The protection of motors in hermetic units is much more difficult than in motors for open type units," continued Mr. Veinott. "Because of the design of the unit, the best practical location for the thermostat is probably near the dome.

"In designing thermostat overheat protection for hermetics one must consider not only the heat conducted from the motor windings by metallic conduction, but also that heat removed by the refrigerant gas. This brings up additional problems.

"For example, the higher the suction pressure of the system, the more heat is removed from the motor. Head pressure also affects motor temperature, higher head pressure resulting in higher compressor temperatures.

"One bit of advice that I want to emphasize," concluded Mr. Veinott, "is always to include an automatic resetting feature in an overload protective device. It seems rather foolish to me to go to the expense of incorporating an automatic thermal protector that has to be reset by hand every time it cuts out."

Promoted by York



FRED C. WOOD

* * *

Wood Heads Washington Office of York

YORK, Pa.—Fred C. Wood has been appointed manager of the Washington national service office of York Corp., J. C. Tweedell, general sales manager, has announced.

Mr. Wood will fill the vacancy left by Rodney F. Lauer who has been named district manager of the company's California operations with headquarters in Los Angeles.

Mr. Wood first joined York in 1928 after graduating from Cornell university as a mechanical engineer. He remained at York until 1931, leaving in that year to join the Westerlin & Campbell Co., representatives in Chicago. He returned to York in 1942 to manage the air conditioning department and was later transferred to an assignment in the Washington office, a position he has held until the present appointment.

Off the Chest

'REFRIGERATOR IN EVERY HOME' IS HIS PLAN

The Mac Silver Co.
Los Angeles, Calif.

Editor:

It would appear to me that there should be a great demand after our Victory to help along the American way of life, if a national institution be sponsored and established for the purpose of installing a refrigerator of some type in every home in the United States.

The various automobile industries have their own controlled financing institutions to help the public buy automobiles on a small down payment—why not a similar financial institution sponsored by AIR CONDITIONING & REFRIGERATION NEWS for the purpose of selling refrigeration units, both commercial and domestic, throughout the United States, on a small down payment and the balance over a period of one year, with the necessary and proper protection to the seller, so far as fire hazard, etc., is concerned.

The motto and slogan of this enterprise might be "A refrigerator in every American Home." To my mind, this is a project that is worthy of attention of the entire refrigeration industry—give it some thought. What say you about it?

MAC SILVER

ERRORS IN STORY ON AIR-BORNE MODEL

U. S. Thermo Control Co.
44 South 12th St.
Minneapolis, Minn.

Sirs:

The story in your Feb. 26 issue on the subject of an air-borne reach-in refrigerator was of great interest to us as we are the manufacturer of the refrigerator. Although the story in general was undoubtedly accurate, we noted a couple of items which were misleading.

The weight of the unit completely loaded with food may be a ton and a half, but the actual weight of the unit itself is closer to 800 pounds. Also, the unit is designed to operate at about 35° F. rather than -18°. It is possible that the unit was operating at +18°, which is far more likely.

Aside from this we think the article is very well written and illustrated.

S. S. LONDON,
Advertising Manager

Editor's Note: If the information in the story on the air-borne refrigerator was incorrect, the fault is that of the Army, which furnished the information.

HE WOULDN'T HAVE PRINTED NELSON LETTER

Landis Electric Co.
121 North Duke St.
Lancaster, Pa.

Editor:

In your Feb. 26 issue you gave a letter, written you by a Mr. Nelson, a very prominent spot.

I disagree with Mr. Nelson 100% but I admire your nerve in printing such an inciting and irrational letter. Although I believe strongly in a free press, I don't think I would print such a letter. It is, in my estimation, an abuse of the privilege of freedom.

Mr. Nelson is entitled to his own opinions and I have no quarrel with him or his right to express them. I do take exception to the way in which he expresses them. Unless all of us exercise some self restraint for the protection of the freedom we have, it will slip away from us. When self restraint is gone, freedom will surely be gone, too.

There is, I think, a great deal of difference between evolution and revolution. Evolution comes about through freedom tempered with self restraint. Revolution, on the other hand, is a result of trying to improve by tearing down what has already been built, and is the result of trying to exercise our right of freedom with no self-restraints. Any free thinking person should want to improve by the evolution principle and will view with alarm acts which indicate a lack of the necessary self restraint to hold to this sane principle for progress.

If I were an editor and received such a letter, I would send it back with this request attached, "We do not object to printing your views if you will state them in the Good Old American fashion of fair play."

HARRY H. LANDIS, JR.

REFRIGERANT CHANGING PROVIDES A PUZZLE

General Delivery
Clarksville, Tenn.

Editor:

I am a refrigerator service man in Clarkesville. I have a set of your Master Service Manuals and enjoy them very much, as they contain useful information.

I have run into a proposition in my servicing and repair of electric boxes, and that is other service men changing refrigerants, especially in household boxes, and not making a note on name plate or any other place what they put in. In fact, I have a Universal Cooler in my shop, and to tell what kind of gas is in it is beyond me.

The information I would like to have is—is there a definite way of telling what kind of refrigerant is in an electric refrigerator without depending on smell of gas or what the nameplate may call for?

Thanking you in advance,

J. W. DAMON

O'Loughlin Gets Philco In North New Jersey

NEWARK, N. J.—Appointment of T. A. O'Loughlin & Co., Newark, as distributor of Philco products in northern New Jersey and Staten Island has been announced by Joseph R. McCoy, Atlantic division manager of Philco Corp.

The O'Loughlin company is headed by Thomas A. O'Loughlin, who recently was placed on the inactive list as a Captain, U. S. Marine Corps, after having been in that branch of the service for the past two years. He has been connected with Philco since 1929 in various executive capacities; his immediate prewar post being vice president of Philco Distributors, Inc., a Philco subsidiary.

Another member of the firm who will direct the company's sales activities is Albert K. Spears, a resident of East Orange, N. J., who has been connected with Philco for the past 17 years in various sales positions throughout the country.

Frank E. Quinn, formerly advertising manager of Philco-New York, who has also been with Philco since 1928, will supervise the advertising and promotional activities of the new organization.

Plans Frozen Food Plant

LANSING, Mich.—Fred B. Shoaff, Jr., who since 1936 has been vice president in charge of sales and advertising for Berghoff Brewing Corp., Fort Wayne, Ind., has resigned to establish a frozen food processing and distributing business here.

J. F. Pedder, Frigidaire advertising manager, practices the "easel" type of demonstration by which Frigidaire's 1945 advertising plans were shown to individual dealers. Lee Clark, assistant general sales manager, and P. M. Bratten, general sales manager, check the advertising which will carry new information about future products.

* * *

Frigidaire Advertising To Tell More About Future Products

DAYTON—Lee A. Clark, assistant general sales manager of Frigidaire, reports that Frigidaire's 1945 advertising program will have three major phases.

Since conservation of both food and equipment continues to be so vital to the war effort, said Mr. Clark, the first important phase will be the continuation of the "service" type advertising used in 1943 and 1944. This advertising gave helpful suggestions on the care and use of refrigerators.

Another phase of the program provides for advertising that will emphasize how Frigidaire's postwar products will provide the features that consumers have indicated they want and expect in postwar electrical appliances.

Still another phase is directed to the postwar purchasers of Frigidaire's commercial refrigeration and air conditioning equipment. This advertising, points out the many different businesses that use Frigidaire equipment and its many different applications and features installations in places of business that are recognized as leaders in their fields.

In addition to this "consumer" advertising, Frigidaire is continuing campaigns in publications reaching special groups including home economists, teachers, architects and builders, owners of income property, etc., besides having a comprehensive campaign in a large number of trade papers reaching appliance dealers.

Cooperative Plant Is Planned In Virginia

RICHMOND, Va.—Plans for erection of a co-operative refrigeration plant in Powhatan County are under way. A charter to the Powhatan Refrigeration Co-operative, Inc., has been granted by the State Corporation Commission. It is capitalized at $50,000 and E. T. Janney of Clayville is president.

Distributors Plan Program for Veterans

(Concluded from Page 1, Column 5)

sale distributor methods.

One of the representatives of the press asked whether the number of new retailers entering the appliance retailing field after the war can be or will be controlled. Mr. Ingraham said that the requirements of a distributor to provide adequate coverage for his territory would govern that situation.

It was further indicated that the number of new dealerships might not be so great after the war because the mortality rate of dealers during the war was less than 23%, and those that have kept going are in pretty good shape financially.

If this is the case, said the press representative, there did not seem to be such a great opportunity for returning veterans who might want to open appliance dealerships. What place might the returning veteran expect to find in the electrical industry, it was asked.

Mr. Ingraham replied that the Appliance Division of the N.E.W.A. had developed a comprehensive employment program for veterans whereby those with electrical training before or during their service with the armed forces would be encouraged to enter many fields and divisions of the electrical industry. For the present, he explained, it appeared to be desirable in the interest of the military program to withhold further activity in this respect.

The Association realizes the great importance of reducing costs of distribution, and has taken definite steps to educate wholesalers on this point, it was brought out. Through the work of the Operating Cost Committee members are furnished with reports showing average costs of handling various commodities. These reports are based on information furnished individually by the membership and which reports in turn can be used by the individual member to gauge his own operations in an effort to bring down his operating costs.

Another activity, being carried out with the help of the War Manpower Commission, is demonstrating how labor and material costs may be reduced through improvement of internal operations and warehouse handling methods.

Now With Deepfreeze

G. H. (ROCK) SMITH

At one time general sales manager of Hotpoint, he has been named vice president and general manager of Deepfreeze Divsion, Motor Products Corp.

Westinghouse Sets Up Separate A. C. Division

(Concluded from Page 1, Column 2)

Precipitron, has been named manager of the Precipitron department of the Air Conditioning Division.

Pointing out that the Precipitron, an electronic device which removes dirt particles from the air, and air conditioning are in increasing demand as a combined unit, Mr. Spray termed the "wedding of these two branches of our business a natural one.

"This is especially true now," he said, "because of the great demand by many war plants for air that has not only been conditioned as to temperature and humidity, but also thoroughly cleaned. For example, binocular, bombsight, and other optical plants which must have especially dirt-free air have found the Precipitron invaluable, since it removes dirt and dust particles down to 1/250,000th of an inch."

Mr. Rathbun joined Westinghouse as a sales engineer in 1916, and 10 years later transferred to the sales staff of the Westinghouse Electric Elevator Co., where he became general sales manager in 1935.

Shortages of Material Hit Stove Production

(Concluded from Page 1, Column 3)

while those in labor areas 1 and 2 may get only 50% of their first quarter allotments. More than 50% of the cook stove production is said to be in the 1 and 2 labor areas.

Components such as castings, forgings, and thermostats are short, it was said. Production of thermostatic controls was set back because of increased war contracts and weather conditions. Gas valves, which could be substituted, are not in sufficient supply to take care of the increased demand for thermostatic equipment and many new stoves will lack oven controls.

Control Makers Meet To Discuss Pricing

(Concluded from Page 1, Column 4)

president of Minneapolis-Honeywell Regulator Co.; E. C. Avery, secretary of Gleason Avery Co.; Estel C. Raney of Ranco, Inc.; V. R. Tate, vice president of Perfex Co.; L. E. Turner, sales manager of White Mfg. Co.; Malcolm E. Henning, vice president of Penn Electric Switch Co.

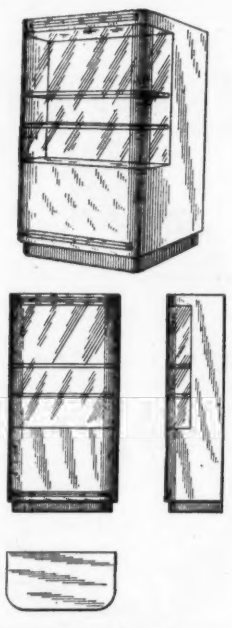
C. H. Hodges, president of Detroit Lubricator Co.; J. I. Zook, vice president and general manager of Sampsel Time Control, Inc.; L. C. Rowe, treasurer of White-Rodgers Electric Co.; and H. W. Nye, treasurer and assistant general manager of General Controls Co.

PATENTS

Weeks of Feb. 6 & 13

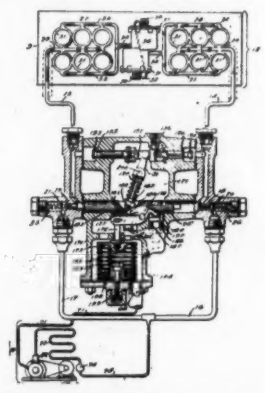
DESIGN

140,272. DESIGN FOR A COMBINED AIR CONDITIONING UNIT AND DISPLAY CABINET. Frank Chalmers, York, Pa. Application Nov. 3, 1944, Serial No. 116,119. Term of patent 14 years. (Cl. D80—11.)



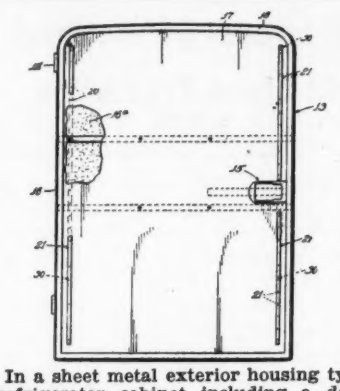
The ornamental design for a combined air conditioning unit and display cabinet, as shown.

2,368,675. REFRIGERATING METHOD. Glenn Muffly, Springfield, Ohio. Original application April 5, 1934, Serial No. 719,099. Divided and this application Jan. 23, 1939, Serial No. 252,292. 3 Claims. (Cl. 62—172.)



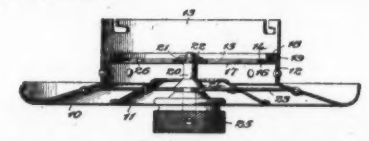
1. The method of heating and cooling a submerged surface for the purpose of alternately forming separate pieces of ice on and freeing ice from said surface comprising, operating a heat exchange means in thermal relation to said surface as an evaporator with liquid refrigerant supplied thereto and vapor removed therefrom, stopping said supply of liquid refrigerant to said means while continuing said removal of vapor therefrom, stopping said removal of vapor from said means and introducing relatively warm liquid refrigerant under relatively high pressure to said means.

2,368,837. REFRIGERATOR CABINET CONSTRUCTION. Earl P. Hubacker, Highland Park, Mich., assignor to Borg-Warner Corp., Chicago, Ill., a corporation of Illinois. Application Feb. 9, 1942, Serial No. 430,022. 2 Claims. (Cl. 62—89.)



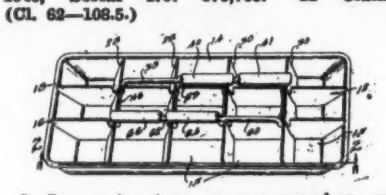
2. In a sheet metal exterior housing type of refrigerator cabinet including a door providing access to the interior thereof and an evaporator therein for cooling the same, said door being defined in part by a sheet metal outer panel and a pressed fiber board inner panel spaced therefrom and separated by insulating material, said arrangement being particularly characterized by the formation in said inner door panel of a plurality of ports located a relatively short distance from at least one of the peripheral edges of said panel adjacent the area where said inner and outer panels are joined together, whereby said evaporator may be effective to remove moisture from between said panels through said ports, and means defining a shield for covering said ports from normal observation, said means including a general channel-shaped strip having a relatively thin back wall portion and a pair of opposed inturned side wall portions arranged to engage said panel and to overlap the peripheral portions of said ports, said side wall portions being further formed with indentations providing communication through said ports to said evaporator.

2,369,303. AIR OUTLET DEVICE. Franz J. Kurth, Friedrich Honerkamp, Benno Poeten, and Herbert K. Kunen, New York, N. Y., assignors to Anemostat Corp. of America, New York, N. Y., a corporation of Delaware. Application March 13, 1942, Serial No. 434,602. 11 Claims. (Cl. 98—41.)



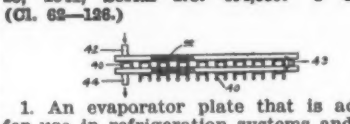
1. An air outlet device comprising an open-ended hollow flaring member, means for connecting the rear or smaller end of said member to an air supply duct, at least one smaller flaring member spaced inwardly from said first mentioned flaring member to provide within the device at least one open-ended flaring passageway for flow of supplied air through and from the device, a fixed slotted disk formed integrally with the rear end of said first mentioned flaring member and extending across the rear end of said passageway, and a cooperating slotted disk mounted for rotatable adjustment to aline and disaline its slots with and from the slots of said fixed disk, thereby to regulate flow of supplied air to said passageway.

2,369,532. ICE TRAY. Clifford R. Carney, Dearborn, Mich., assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application Dec. 19, 1940, Serial No. 370,763. 11 Claims. (Cl. 62—108.5.)

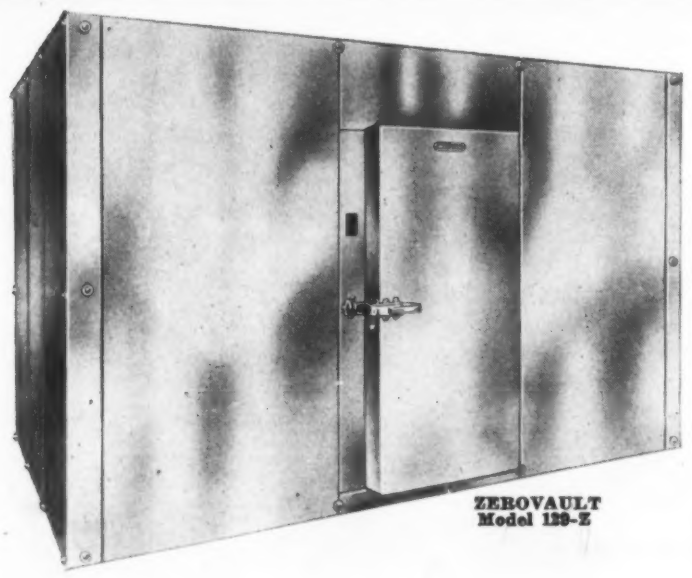


2. In an ice tray, a pan member, and a grid member to divide the space within the pan into a plurality of ice block compartments of convenient size for domestic use, said grid comprising a plurality of generally longitudinally extending separator members, a plurality of generally transversely extending separator members mounted on the longitudinal separator members and movable from an angular position toward the vertical to release ice, and separate means hingedly mounted on the longitudinal separator members to engage each transverse separator member to move each transverse member angularly to release ice.

2,369,564. EVAPORATOR PLATE. Ernest Gygax, St. Louis, Mo., assignor to Curtis Mfg. Co., Wellston, Mo., a corporation of Missouri. Application July 25, 1941, Serial No. 404,059. 3 Claims. (Cl. 62—128.)



1. An evaporator plate that is adapted for use in refrigeration systems and comprises a sheet of metal having a plurality of projections thereon, said projections being formed so they are longer than they are wide, said projections being formed so they all extend in the same direction and form a plurality of spaced uni-directional rows that are parallel to each other, a second sheet of metal hat is seam-welded to the first said sheet of metal to form a gas tight plate, said second sheet of metal contacting the projections on said first sheet of metal in intimate engagement, and an inlet tube and an outlet tube that are attached to the said plate and are in communication with the interior of said plate, said inlet and outlet tubes being adjacent one side of said plate, said projections being arranged so the ends of the projections in one row overlie the ends of the projections in adjacent rows, said rows being disposed obliquely of said one side of said plate and being disposed to direct incoming liquid refrigerant away from said outlet tube while permitting gaseous refrigerant to move toward said outlet tube.



CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.
RATES for all other classifications $5.00 per insertion. Limit 50 words.
Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.
PAYMENT in advance is required for advertising in this column.

EQUIPMENT WANTED

USED AND surplus refrigeration and air conditioning equipment is in great demand. Wire us for speedy action and the highest cash price. Parts, units, complete systems purchased anywhere, all sizes and any condition. E. M. FAIRBANKS CO., 2548 E. Tremont Ave., New York City 61, N. Y.

POSITIONS AVAILABLE

WANTED: Manager for our Commercial Refrigeration and Hotel Supply Department. Must be able to make sales direct to merchants as well as train new salesmen. Must be experienced and capable of earning over $5,000 yearly. KUHR BROTHERS, Savannah, Ga.

COMBINATION DRAFTSMAN and general office engineer for refrigeration-air conditioning contractors-distributors. Well financed; will expand considerably postwar, resulting excellent opportunity right man becoming key employe. Experience both Ammonia, "Freon" applications desired but not required. Application confidential; advise qualifications, salary expected. RUSHTON EQUIPMENT CO., Box 1751, Birmingham, Ala.

SAN DIEGO, California. Wright Refrigeration Service requires first class service men at $1.25 per hour with time and half over 40 hours per week. Steady work, lots of overtime, and the best climate in America. WRIGHT REFRIGERATION SERVICE, 1337 India St., San Diego, Calif.

REFRIGERATION shop foreman. $75 weekly, 48 hours, New York City. Box 1671, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER. Practical experience in erection, operation, and maintenance. Full charge of shop repairs "Freon" and ammonia compressors. Gold Seal license. Tool maker. Union scale. Distributor for York. Location Jersey City, New Jersey. State qualifications, age, nationality. All replies held strictly confidential. Box 1683, Air Conditioning & Refrigeration News.

WANTED: REFRIGERATION service-erection man for commercial and industrial work in lower New York State. Location Poughkeepsie, N. Y. Must be familiar with "Freon" commercial plants. Write giving full details. Union scale. Box 1684, Air Conditioning & Refrigeration News.

SERVICE AND Installation Mechanics, experienced on commercial refrigeration. Good paying, permanent all year around jobs with unlimited postwar possibilities for right kind of men. ACCURATE REFRIGERATION CO., 851 First Ave., New York City.

WANTED EXPERIENCED electric refrigeration service man for Wholesale Service Department. Must furnish satisfactory references as to character and service ability. Position offers real opportunity, good pay, and excellent working conditions. Ex-serviceman preferred. Apply giving full details to ROSKIN BROS., INC., 351 Central Ave., Albany 5, N. Y.

FOREMAN for commercial refrigeration plant, must have thorough knowledge of business, capable of handling men and details. Exceptional opportunity, present and postwar for right party. New York City. Box 1689, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER for test and research work on evaporators. (Rapidly expanding company located in Chicago, Ill.) Outline education, experience, and salary expected. Capable of discussing refrigeration problems with customers through personal contact and correspondence. Box 1687, Air Conditioning & Refrigeration News.

WANTED: REFRIGERATION service man to go in business for himself, shop and three rooms next door to us. We alone will give you plenty of work, also will finance reliable commercial mechanic. If you are looking for a future, see GOODYEAR, 3811 Penn Ave., Pittsburgh 1, Pa., Ma. 5959.

WANTED: DESIGN engineer for refrigerant flow control valves. Permanent position with progressive manufacturer. Midwest. Give qualifications in first letter. Box 1690, Air Conditioning & Refrigeration News.

POSITIONS WANTED

SALES REPRESENTATIVE. Eighteen years experience in the household and commercial field as manufacturer's representative setting up distributors and dealers, also as distributor salesmanager. Experience also covers laundry equipment, gas and electric ranges, and radios. Representation for manufacturer or distributor in Texas only. P. O. Box 8067, Houston 4, Tex.

REFRIGERATION SERVICE engineer. Eleven years experience. Knowledge of commercial, industrial air conditioning, marine, low temperature service and installation. Wishes to locate in Los Angeles, Calif. Box 1686, Air Conditioning & Refrigeration News.

POSITIONS WANTED

MANUFACTURER'S REPRESENTATIVE Qualified Air Conditioning and Refrigeration Engineer, 17 years experience organizing and training Distributor and Dealer personnel. Recently honorably discharged Army Air Forces. Desires to represent reputable manufacturers of Commercial Refrigeration Equipment and kindred parts in Texas and surrounding territory exclusively. Financially responsible. Box 1665, Air Conditioning & Refrigeration News.

EXECUTIVE ENGINEER with unusual record of achievement as Manager, Sales executive, and engineer. Desires connection where this unusual combination of abilities can be used to best advantage. Wide experience in all phases of refrigeration, except household, and includes knowledge of refrigerator business. Box 1688, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

500 RE-MANUFACTURED Frigidaire and Kelvinator ½, ¾, 1, and 1½-H.P. air cooled condensing units with new condensers and new single phase 110/220 60 cycle motors. 2 to 12 holes ice cream cabinets. Write for list and prices. EDISON COOLING CORP., 310 East 149 St., New York 51, N. Y.

VICTOR Ice Makers 2,000 pounds capacity. Cafeteria water coolers. Two-hp. American Marine Motors 230 volt D.C. All new Retitled equipment. No priority required. Box 1685, Air Conditioning & Refrigeration News.

DENNETT EQUIPMENT CO is pleased to announce that arrangements have been made with new landlord, whereby they will remain at their same location 311 Canal St., New York City. Special—30 new General Electric type FR unit room air conditioners. Maurey fan pulleys $50 per hundred, assorted sizes.

REACH-IN refrigerators, all sizes—20 to 70 cu. ft. Some all porcelain models. Walk-in coolers, freezers, blower coils, ice chests. Immediate delivery. FROZEN-AIRE REFRIGERATOR CO., 1327 Poplar St., Philadelphia 23, Pa.

USED double duty display cases, no priority. Good condition, all-porcelain equipped with coils and platters. Used General Electric condensing unit with 1-H.P. D.C. motor, late model, $110. New General Electric equipped 6-can milk cooler, $260. Porcelain reach-ins, steel walk-ins, freezer cabinets. JORDON REFRIGERATOR CO., 235 North Broad St., Philadelphia 7, Pa.

FRANCHISES WANTED

MR. MANUFACTURER: are you interested in representation in Florida for your refrigeration or air conditioning products? We may be just what you are looking for. Your proposition will be kept very confidential. We have finances and are progressive. Write Mr. Griffin, SOUTHLAND REFRIGERATION CO., 202 Postal Bldg., Miami 32, Fla.

BUSINESS OPPORTUNITIES

FOR SALE: one story, fully equipped refrigeration shop and building, approximately 6,000 sq. ft. cement floor, drained, modern offices set up for volume repair or light manufacturing, location vicinity Michigan Avenue district near south side, Chicago, Price $15,000, ½ down, balance terms. GARDEN CITY ENGINEERING CO., 100 N. LaSalle St., Chicago 2, Ill.

Phila. Conditioning Group Reorganizes

PHILADELPHIA—The Air Conditioning Division of the Electrical Association of Philadelphia approved recommendations calling for changes in the organization and procedure of that group. Hereafter the name will be the Air Conditioning and Industrial Refrigeration Division.

The office of vice-chairman will be added to the former list of officers which were a chairman and secretary. An executive committee of six is called for under the new organization plan, together with four standing committees. These are—a legislative committee, promotion and publicity committee, membership committee, and an outing and entertainment committee.

The reorganization will become effective at the next June meeting.

Advantages of 'Indoor Climate' Cited For National Home Builders Association

CHICAGO—"Controlled indoor climate is the greatest new service to be offered to the postwar home," stated Paul B. Zimmerman, president of the Indoor Climate Institute in an address to the National Association of Home Builders here recently.

In a one-man "Information Please" session Mr. Zimmerman answered six pertinent questions that are being asked about controlled indoor climate.

The first question: "What percentage of the home construction dollar should be allocated to heating?"

In answer to this he said, "A sufficient appropriation should be made to afford complete human comfort. Controlled indoor climate sets a new high standard of living for Americans and supplies the missing link in making the home an ideal machine for living. Whereas as little as 5% of the construction dollar has been allocated for heating, a minimum of 10% for heating is well justified in the postwar period."

LATEST STANDARDS

The second question: "What are the latest installation standards and practices?"

"The several branches of the heating and air conditioning industries have worked diligently to standardize installation practices based on their best experiences," he said. "These standards and practices are now available in printed form and furnished by such groups as the Institute of Boiler and Radiator Manufacturers, the National Warm Air Heating and Air Conditioning Association, and the Air Conditioning and Refrigerating Machinery Association. The leading plumbing contractors and heating contractors are experts in properly servicing jobs and making installations that conform with the latest industry practices. If the building fraternity will accept their counsel and recommendations, much will be done to improve the comfort services in homes today as well as in the postwar period."

Question number three: "How is 'controlled indoor climate' obtained?"

"Controlled indoor climate is obtained when contractors properly install the correct equipment to do an adequate job of providing ideal comfort conditions 12 months in the year," Mr. Zimmerman declared.

CONTRIBUTION TO HEALTH

The fourth question was: "What is the comfort and health value of controlled indoor climate?"

"The average person consumes 3 pounds of food a day, 4 pounds of water, and 25 pounds of air," he said. "We eat several times a day. We drink water frequently. We breathe continuously. The large amount of air consumed has a greater effect upon human health than food, water, or vitamins. Dirt-carrying air is just as injurious as improper food, but clean, well-tempered air makes a real contribution to good health."

Number 5 in the question series: "Is year-around air conditioning practical for low cost homes?"

"It seems quite likely that cooling equipment can be provided in the postwar period to take adequate care of the average small home at a cost no greater than $3 a month on a FHA contract," Mr. Zimmerman said. "The operating cost for this size cooling equipment will probably not be more than $50 for the summer season. A recent survey among home owners indicates that 30% of those interested in building new homes will want year-around air conditioning if they can possibly afford it."

The last question: "What is the Indoor Climate Institute and how does it aid the builder?"

Mr. Zimmerman explained that the Indoor Climate Institute is a co-operative educational organization established to formulate and put into effect a program of heating, cooling, and air conditioning in the interest of public health through greater indoor comfort. The national organization is assisting in forming local chapters, made up of contractors, dealers, fuel companies, and utilities. Several chapters are already underway.

The local groups will bring to the attention of builders the latest installation standards and practices, will assist in equipping demonstration homes, will talk before home planning organizations and generally promote the idea that controlled indoor climate represents the 4th Dimension in Living, as important to health and comfort as food, clothing, and shelter.

More Ice Cream for the Navy

Most ships of the U. S. Navy have equipment to produce and store ice cream for officers and men. Here Emery Thompson, Jr., and J. Burr Jenkins, executives of the Emery Thompson Machine & Supply Co., inspect this installation of an E-T freezer and cabinet aboard a new Navy APA vessel during action.

Montreal Meeting Program Completed

(Concluded from Page 1, Column 2)

afternoon is an educational program, arranged by W. H. Sneath, Toronto, first vice president.

This program will be widely varied in nature, covering both technical and marketing problems on various types of equipment and components, and including speakers from both Canadian and U. S. firms.

A dinner dance under the auspices of the Mt. Royal chapter of R.S.E.S. on Monday night will be the high spot on the entertainment program.

Complete program is as follows:

SUNDAY, MARCH 18

9:00 a.m.—Registration.

10:00 a.m.—Opening remarks by President W. J. Marshall.

10:15 a.m.—Introduction of International Officers.

11:00 a.m.—Reports.

11:30 a.m.—Appointment of Nomination Committee.

2:00 p.m.—"Installation and Care of Seals," Edward Wahl, Rotary Seal.

2:30 p.m.—"Home and Farm Freezers," C. W. Stoner, Ben Hur Mfg. Co.

3:00 p.m.—"Design and Maintenance of Locker Storages and Sharp Freezers," J. H. Lock, J. H. Lock & Sons, Ltd.

3:30 p.m.—"The Application, Installation and Servicing of Blower Coils," C. Heilig, Air Coils Mfg. Co., Ltd.

4:00 p.m. — "Information Please," Harry Parish, Universal Cooler Co.

MONDAY, MARCH 19

10:00 a.m.—"Copelametic Accessible Hermetic Compressors," W. D. Jordan, Liquid Carbonic Corp.

11:00 a.m.—"Progress of Service from 1920-1945," Paul B. Reed, Perfex Corp.

11:30 a.m.—Election of Officers.

2:00 p.m.—"Your Problems and Mine," C. Lowe, Administrator, Capital Equipment and Electrical Products.

2:30 p.m.—"Complete Survey of the Domestic Refrigerator Field," H. T. McDermott, International Secretary, R.S.E.S.

3:30 p.m. — "Information Please," Harry Parish, Universal Cooler Co.

6:30 p.m.—Dinner dance.

Civilian Consultants Aid Army Refrigeration

(Concluded from Page 1, Column 3)

critical, and it is of the utmost importance to civilian morale that the public be informed of the objective program which the Army's highest headquarters are promoting in every unit, in the interest of food conservation," advised General Beyette.

General Hardigg indicated that the Army's officer personnel in charge of operating refrigeration facilities is doing the utmost in execution of the responsibilities of the jobs, but they lack technical knowledge in many cases, and that is where the value of consultants comes into the picture.

Civilian consultants should not "pull their punches," said General Hardigg, but should tell the Army just exactly what they find wrong.

These civilian experts have been assigned as follows:

Herbert Farnsworth of Boston, First Service Command; Frank A. O'Hara and Arthur N. Otis of New York City, Second Service Command; J. F. Lenzen of Baltimore, Third Service Command; C. A. Martin of Nashville and J. R. Rushton of Birmingham, Fourth Service Command; George Hilgemeier of Indianapolis, Fifth Service Command.

E. G. Erickson of Chicago, Sixth Service Command; E. M. Dodds, Kansas City, Mo., Seventh Service Command; H. S. Von Phul of San Antonio, C. J. Goodfellow of Fort Worth, and William A. Moore of New Orleans, Eighth Service Command; R. M. Hagen of Los Angeles, Edgar Burns of Portland, Ore., and J. W. Howell of San Francisco, Ninth Service Command.

'Atchison Cave' Storage One-Fifth Complete

ATCHISON, Kan.—Installation of cooling equipment at the Kerford Quarry, the government's huge "underground cold storage warehouse," is about one-fifth completed, W. C. Costello of the Defense Plants Corp. declares.

P. S. Egbert, in charge of the installation, said the cooler will have eight to nine acres of floor space. Forty percent of the concrete flooring already has been laid, with food stored as rapidly as a room is completed.

The present average temperature of 60° F. is expected to be reduced to 30° F. when installation of cooler equipment is completed at an estimated cost of $1,378,000.